

GLASGOW CORPORATION.

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# REPORT

OF THE

# MEDICAL OFFICER OF HEALTH.

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CITY OF GLASGOW

AND

THE ADDED BURGHAL AREAS.

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1912.

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ORDERED BY THE COMMITTEE ON HEALTH TO BE PRINTED.



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# REPORT

OF THE

## MEDICAL OFFICER OF HEALTH.

1912.

### SECTION I.

On November 5th, 1912, the boundaries of the City of Glasgow were extended to include the Burghs of Govan, Partick, and Pollokshaws, and certain landward areas in the Counties of Lanark, Renfrew, and Dumbarton. The landward areas included in Lanarkshire Shettleston and Tollcross, in the east, and the portion west of Govan Burgh excluding Deanside Estate; in Renfrewshire, certain areas to the south and west of the City, the former including Cathcart and the landward portion east of the Burgh of Pollokshaws, the latter including Whiteinch, Jordanhill, and Scotstounhill; and in Dumbartonshire, an area to the north-west of the City, including Temple.

#### PARISHES.

Portions of the Lanarkshire Parishes of Glasgow and Govan, of the Renfrewshire Parishes of Cathcart, Eastwood, and Renfrew, and of the Dumbartonshire Parish of New or East Kilpatrick, were thus included within the boundaries of the City of Glasgow, and, so far as they were outwith the County of Lanark, were transferred, and included within the boundaries of that County. The Act thus not only effects an alteration in the boundaries of the City, but also in the boundaries of the Counties of Lanark, Renfrew, and Dumbarton.

#### REGISTRATION DISTRICTS.

The Registration Districts affected by these changes, their total populations at the 1911 Census, and the portions thereof added to the City were as follows:—

COUNTY OF LANARK.							Added to City.
Shettleston,	...	...	...	...	...	32,046	26,114
Plantation,	...	...	...	...	...	28,771	28,771
Govan,	...	...	...	...	...	63,228	63,210
Partick,	...	...	...	...	...	66,849	66,849
COUNTY OF RENFREW.							
Cathcart,	...	...	...	...	...	*15,205	12,801
Eastwood,	...	...	...	...	...	†18,505	12,932
Scotstoun and Yoker,	...	...	...	...	...	14,532	9,716
COUNTY OF DUMBARTON.							
New or East Kilpatrick,	...	...	...	...	...	13,798	3,598
							<hr/> 223,991 <hr/>

\* Exclusive of 31,483 in Glasgow as before extension.

† „ „ 6,010 „ „

As the extension only took effect eight weeks before the close of the year, it was agreed to treat each administrative unit of the amalgamation separately for statistical purposes, and arrangements were made with the Medical Officers of the County areas to complete the vital statistics of the year for the landward areas as existing before extension. The added Burghs have been similarly dealt with by this Department, and Appendix (No. VI.) to this Report contains the records of these Burghs separately to the end of 1912.

The present Section of the Report, in consequence, deals—save where otherwise stated—with the area of Glasgow as existing before extension, and the following Table summarises the principal items of statistical information during 1912 for this area.

	Registrar General.		Medical Officer.
Population, ... ..	785,600*	...	784,552†
Acreage, ... ..	...	12,975	...
Persons per acre, ... ..	60	...	60
Number of Inhabited Houses, ... ..	...	164,541	...
Deaths—Number registered, ... ..	...	13,797	...
„ After correction for Institutions, &c., ... ..	...	12,760	...
Births—Number registered, ... ..	...	22,044	...
„ After correction, ... ..	...	21,812	...
Death-rate per 1,000 living—All causes, ... ..	17·6	...	16·3‡
Birth-rate per 1,000 living, ... ..	28·1	...	27·8‡
Deaths under One Year—Registered, ... ..	...	2,740	...
„ „ After correction, ... ..	...	2,667	...
Deaths „ „ „ per 1,000 births, ... ..	124	...	122‡
Death-rate per 1,000 living from—			
Zymotic diseases, ... ..	...	...	1·88
Tuberculous diseases—			
(a) Phthisis, ... ..	...	1·32	1·97.
(b) Others, ... ..	...	0·65	
Diseases of respiratory system, ... ..	...	1·47	3·23
Pneumonia, ... ..	...	1·76	
Diseases of circulatory system, ... ..	...	...	1·90
Diseases of nervous system, ... ..	...	...	1·58
Malignant diseases (cancer, &c.), ... ..	...	...	0·93
Septic diseases, ... ..	...	...	0·23
Violence, ... ..	...	...	0·52
Premature births, ... ..	...	...	0·58
All other causes, ... ..	...	...	3·44
All causes, ... ..	...	...	16·26

\* Estimated to middle of year.

† Estimated population.

‡ Adjusted for outward transfers.

## POPULATION.

At the date of the Census, 1911, the population residing on the area now included within the Municipal Boundary numbered 1,008,487, and may be estimated to have increased to 1,009,933 by the middle of the year.

At the corresponding period of 1912 it had reached 1,015,165.

These estimates are based on information obtained from three sources, namely, the Census Report of the Registrar-General (Volume I. Part 24); the City Assessor's Return of Inhabited Houses within the Municipal Boundary as at June, 1912; and the Assessment Rolls of the several added areas at the same date.

Of the Census population, 784,496 were within the municipal area of Glasgow as then existing, and 223,991 within the areas subsequently added.

Between this date and midsummer, 1912, the estimated addition to the population within the original boundary was only 56, but to the added areas it was 7,174, or 3 per cent.

The territorial distribution of the added areas is given in the Table which follows. Of the total population there given, 169,386 were already under burghal administration before amalgamation, while 28,490 were from landward portions of the County of Lanark, 22,517 from the Upper Ward of Renfrewshire, and 3,598 from Dumbartonshire—in all 54,605 were under county administration.

POPULATION AT CENSUS, 1911, OF AREAS ADDED TO CITY IN 1912.

Parish.	Burgh.	Landward.	Total.
Glasgow, - - - -	—	26,114	26,114
Govan, - - - -	{ Govan, - 89,605		
	{ Partick, - 66,849		
	156,454	2,376	158,830
Cathcart, - - - -	—	12,801	12,801
Eastwood, - - - -	Pollokshaws, 12,932	—	12,932
Renfrew, - - - -	—	9,716	9,716
New Kilpatrick, - -	—	3,598	3,598
	169,386	54,605	223,991
Old Glasgow, - - - -	- - - -	- - - -	784,496
Greater Glasgow, - - - -	- - - -	- - - -	1,008,487

The populations of Paisley and Rutherglen Parishes within the City were not altered by annexation.

*Ward Populations.*—As the vital statistics for 1912 will be calculated for the several areas as existing prior to the extension of the boundary, Table I. in Appendix I. has been prepared to show the number of inhabited houses and of estimated population within the several wards of the municipality as at midsummer, 1912 (old area).

From these Tables, and the information now available for the added areas it is possible to construct three districts of differing growth, a central one, consisting practically of the parliamentary area of the city, in which depletion appears to be constant although varying in rate, and an extra parliamentary area still within the older boundary, where the growth is only occasionally interrupted, and is at all times much below its former rate. The third district is represented by the area of extension.

Table showing inhabited houses within and beyond the Parliamentary Boundary of the city before extension:—

	Within.*	+	-	Without.	+	-	Total.	
1910,	124,666	...	702	39,731	...	116	...	818
1911,	123,702	...	964	39,928	197	...	...	767
1912,	123,180	...	522	40,444	516	...	...	6

\* The houses given above are as they appear in the Valuation Roll and are not adjusted for the purposes of estimating the population.

### UNOCCUPIED HOUSES.

Through the courtesy of the City Assessor, I am able to include a statement of the houses which were found unoccupied during the course of the Survey made by his Department during the month of June, 1912. The details for



each Ward will be found in Table II. of Appendix I. The total for the City, classified according to size, for several years, has been as follows:—

NUMBER OF UNOCCUPIED HOUSES, CLASSIFIED ACCORDING TO NUMBER OF APARTMENTS.

	1908.	1909.	1910.	1911.	1912.
One apartment, ...	3,989	3,451	3,615	3,816	3,731
Two apartments, ...	8,080	8,665	10,048	9,895	9,460
Three „ ...	2,842	2,906	3,484	3,483	3,426
Four „ ...	959	1,034	1,221	1,232	1,180
Five „ ...	1,220	1,230	1,347	1,227	1,090
	17,090	17,286	19,715	19,653	18,887

The number of unoccupied houses in 1911 was slightly less than in the preceding year, and in 1912 they have become still further reduced.

#### LININGS GRANTED BY DEAN OF GUILD COURT.

In Table III. of the Appendix a statement of the linings for new houses granted by the Dean of Guild during the year ending 31st August, 1912, which has been supplied me by the Master of Works, is reproduced. Altogether, linings were granted in respect of 200 houses, as compared with 284 in the preceding year.

#### ACREAGE.

The acreage, number of inhabited houses, and population in each of the Municipal Wards, with the increase or decrease in population since the Census of 1911, is contained in Appendix, Table IV. The acreage of the old City remains at 12,975 acres.

#### TEMPERATURE AND RAINFALL.

The summary of the results of meteorological observations taken at the Glasgow University by Professor Becker shows that rain fell on 208 days, or 5 days less than the yearly average since 1868. Fourteen years had a higher rainfall and twenty-four years had more days on which rain fell. Snow was recorded on ten days, as compared with the average of 12.

During the year the temperature was on 197 days above the average, while the year is the thirteenth warmest in forty-five years. The temperature throughout, however, was more equable, on no day did it reach 75°, and on three days only did it exceed 70°. On six days (average number three) the temperature remained all day below freezing point.

Bright sunshine was recorded on 244 days, but the number of hours of sunshine is the lowest on record.

Appendix Table V., compiled from the information supplied by Professor Becker, shows the mean temperature and rainfall for each month with the plus and minus differences from the average of forty-four years.

#### MARRIAGES.

7,736 marriages were registered in Glasgow in 1912, as compared with 7,472 in 1911. These represent rates per 1,000 persons living of 9·8 and 9·5 respectively on the estimated populations. The following Table shows the marriage rate over a series of years, and it will be observed that the lowering

of the rate recorded for 1909 and 1910, associated no doubt with the depressed industrial conditions prevailing during these years, has made further recovery.

GLASGOW.—MARRIAGE RATE PER 1,000 PERSONS LIVING.

1870, ... ..	9·8	1901-1905, ... ..	9·4
1871-1875, ... ..	9·9	1906, ... ..	9·8
1876-1880, ... ..	9·0	1907, ... ..	9·6
1881-1885, ... ..	9·4	1908, ... ..	9·0
1886-1890, ... ..	8·8	1909, ... ..	8·2
1891-1895, ... ..	9·0	1910, ... ..	8·7
1896-1900, ... ..	9·9	1911, ... ..	9·5
		1912, ... ..	9·8

The usual practice of stating the marriage rate in relation to the total number of persons living is not without error, and in particular it fails to reflect the true rate occurring in a population in which the proportion of persons below or above the ages of marriage is undergoing change. In the following Table it is shown that when the marriage rate is calculated on the population at all ages a decrease of 6 per cent. is shown during the last 40 years, whereas when it is calculated on the unmarried and widowed female population over 15 years of age the reduction amounts to 12 per cent.

GLASGOW.—MEAN ANNUAL MARRIAGE RATES.\*

	Calculated on Total Population at All Ages.		Calculated on the Unmarried Females and Widows aged 15 years and upwards.	
	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.
1870-72	10·0	100	54·7	100
1880-82	8·8	88	50·7	93
1890-92	9·5	95	46·5	85
1900-02	9·6	96	50·9	93
1910-12	9·4	94	48·4	88

\* From the Registrar-General's Annual Reports.

BIRTHS.

22,044 births were registered in Glasgow during the year 1912. After deducting those not belonging to Glasgow, although born within the municipal area, and adding those born beyond the municipal area but belonging to Glasgow, there remain 21,812 births properly belonging to the City. This represents a birth-rate of 27·802 per thousand persons living, as compared with 21,584 births, representing a birth-rate of 27·513 in 1911. The birth-rate represents an increase in the rate equal to 289 per million compared with 1911.

In the Report for last year there was inserted a Chart showing the birth-rate of the City in each year since 1855 (as recorded by the Registrar-General).

The Chart is repeated for the present year, and shows the variation of the birth-rate in relation to the mean of the years 1855-1912.

As with the marriage rate, so it is with the birth-rate when calculated over the total population, and a correction similar to that adopted in calculating the former is here introduced, save that the amended birth-rates are calculated on the number of females living between the ages of 15 and 45 years. Again there is illustration that the decrease shown in calculating the birth-rate over the whole population falls short of that which is actually occurring, and that although it is now 32 per cent. below the rate for 1870-72, when calculated on the whole population, the actual reduction amounts to 37 per cent. when calculated on the number of women at child-bearing ages.

GLASGOW.—MEAN ANNUAL BIRTH-RATE.\*

	Calculated as a proportion per 1,000 on Total Population at All Ages.		Calculated as a proportion per 1,000 on the Number of Women aged 15-45 years.	
	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.	Rate per 1,000.	Compared with Rate in 1870-72, taken as 100.
1870-72	40·9	100	173·5	100
1880-82	35·9	88	150·7	86
1890-92	35·2	86	125·6	72
1900-02	32·1	79	124·2	72
1910-12	28·0	68	109·2	63

Returning to the usual method of stating these rates, we have the following for several periods since 1871 :—\*

						Glasgow.	Scotland.
1871-80,	...	...	...	...	...	36·6	34·9
1881-90,	...	...	...	...	...	36·5	32·4
1891-95,	...	...	...	...	...	33·9	30·7
1896-1900,	...	...	...	...	...	33·1	30·0
1901-1905,	...	...	...	...	...	31·3	28·9
1906-1910,	...	...	...	...	...	27·4	26·7
1911,	...	...	...	...	...	27·7	25·6
1912,	...	...	...	...	...	28·1	25·9

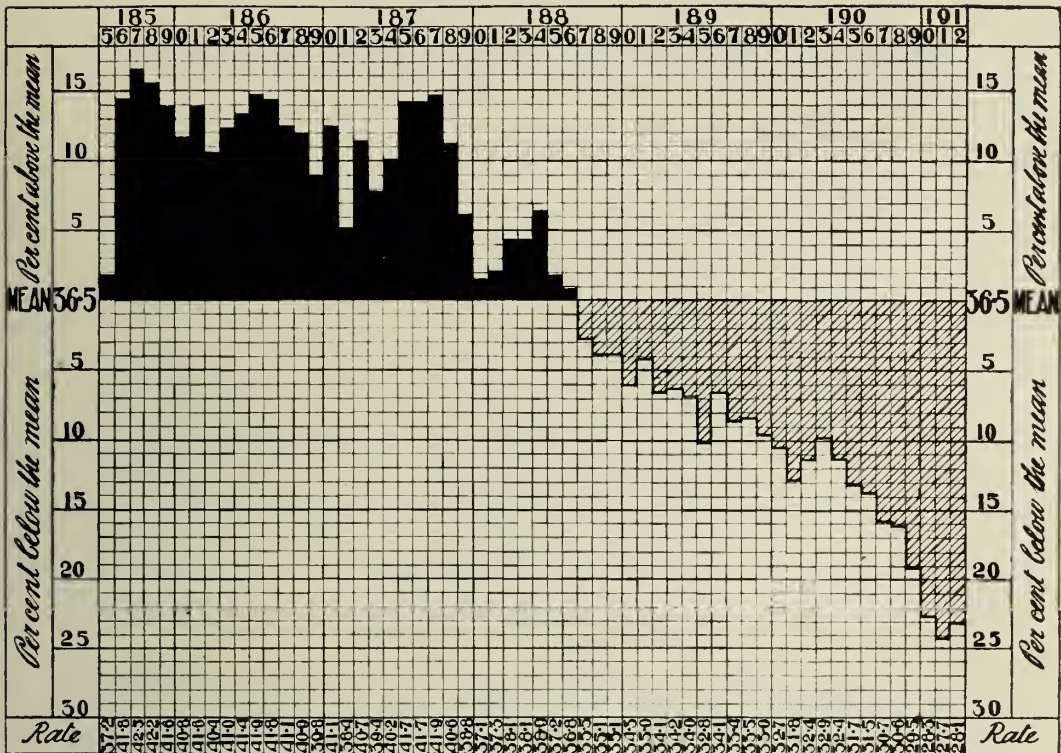
The birth-rate shows considerable variation throughout the several Wards. In Kinning Park, Mile-end, Dalmarnock, and Hutchesontown, it exceeded 35 per 1,000 in the order named, while Springburn, Maryhill, Cowlairs, Whitevale, and Govanhill had rates exceeding 30 per 1,000. Other Wards whose rates exceeded the mean of the City are Anderston, Kingston, Blackfriars, and Calton, while the lowest birth-rates were recorded in Blythswood, Pollokshields, and Park Wards.

The number of births and the rate in each Ward, together with the corresponding rates for several former years, are shown in Table VI. in Appendix.

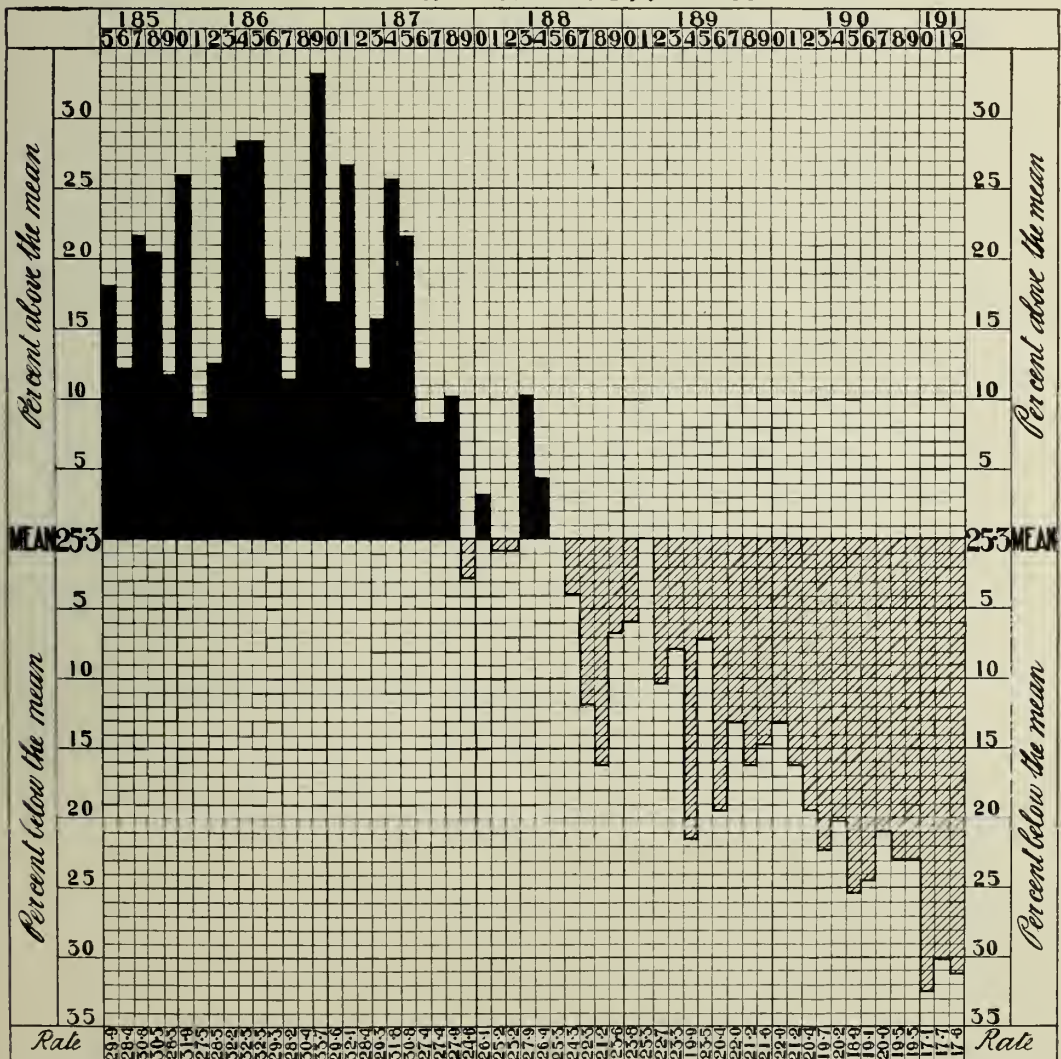
\* The rates in these Tables are taken from the Registrar-General's Annual Reports.



# Birth-rate 1855-1912



# Death-rate 1855-1912





On the basis of the Registrar-General's Returns, the following comparison is made of the rates for several periods, in Glasgow and other towns:—

	1902-1911.	1912.
<b>Glasgow,</b> ... ..	<b>29·0</b>	<b>28·1</b>
Edinburgh, ... ..	22·4	20·9
Dundee, ... ..	27·5	25·2
Aberdeen, ... ..	27·1	25·3
London, ... ..	26·3	24·5
Liverpool, ... ..	32·2	29·6
Manchester, ... ..	29·4	25·4
Birmingham, ... ..	29·2	26·2

#### DEATHS—ALL CAUSES.

13,797 deaths from all causes were registered in Glasgow during the year 1912.

These are subject to correction for deaths occurring in institutions and for extra-mural deaths, as follows:—

Deaths registered as occurring within the City, ... ..	13,797
Deduct deaths occurring in Glasgow, chiefly in Institutions, of persons whose usual residence was beyond the City boundary, ... ..	1,241
	<hr/>
	12,556
Add deaths of Glasgow citizens, chiefly in Govan Poorhouse, ... ..	204
	<hr/>
Deaths properly belonging to Glasgow, ... ..	12,760
	<hr/> <hr/>

This represents a death-rate of 16·26 per thousand living, as compared with 16·44 in the preceding year, or a decrease of 177 per million. Excepting the latter year, the lowest rate previously recorded was 17·58, in 1906.

On the Registrar-General's estimate of population as at midsummer and uncorrected deaths, the death-rate is 17·6 per thousand.

For several periods the death-rate from all causes, *calculated on the inhabited house estimate of the population and on the deaths as corrected*, has been as follows:—

#### GLASGOW.—ALL CAUSES—DEATH-RATE PER 1,000 LIVING.

1881-1890, ... ..	24·22
1891-1900, ... ..	21·53
1901-05, ... ..	18·97
1906-1910, ... ..	17·51
1911, ... ..	16·44
1912, ... ..	16·26

In order to compare these rates with those of other towns, we must revert to the deaths as registered, and to the Registrar-General's estimate



of the population, and in the following Table the rates are given for several of the large Towns in England and Scotland:—

GLASGOW AND SEVERAL TOWNS—DEATH-RATE PER 1,000 LIVING.

				1902-1911.		1912.
<b>Glasgow,</b>	...	...	...	<b>19·2</b>	...	<b>17·6</b>
Edinburgh,	...	...	...	17·0	...	15·7
Dundee,	...	...	...	19·1	...	18·8
Aberdeen,	...	...	...	16·4	...	15·3
London,	...	...	...	15·3	...	13·6
Liverpool,	...	...	...	20·3	...	18·1
Manchester,	...	...	...	18·9	...	16·0
Birmingham,	...	...	...	17·1	...	14·1

QUARTERLY DEATH-RATES.

For comparative purposes a Table, based on the Quarterly Returns of the Registrar-General, is here introduced, showing the quarterly death-rates for each year since 1904.

GLASGOW.—QUARTERLY DEATH-RATE, 1904-1912.

	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	Average. 1904-1911.	1912.
First Quarter,	22·5	20·6	20·5	23·2	25·1	22·1	19·4	19·8	21·7	20·8
Second „	19·6	19·6	19·6	21·8	18·8	18·5	17·5	17·3	19·1	16·5
Third „	17·3	16·0	16·4	15·5	16·1	14·0	14·9	16·2	15·8	13·8
Fourth „	21·0	19·5	19·9	19·8	17·9	23·4	16·6	17·7	19·5	19·0
Year,	20·2	18·9	19·1	20·0	19·5	19·5	17·1	17·7	19·0	17·6

A chart, showing the death-rate in each year since 1855 in relation to the mean of the period 1855-1912, will be found facing page 6.

WARD DEATH-RATES.

In Table VII. of the Appendix the deaths and death-rates for each of the several Wards are given for 1912, and for comparison the corresponding rates since 1903.

On the average rates for these years it is now possible, with some degree of accuracy, to grade the Wards in relation to the mean for the City, and I select for illustration eight in which the rate is *continuously* in excess. These are as follows:—

Ward.	Average Death-rate per 1,000. 1903-12.	Ward.	Average Death-rate per 1,000. 1903-12.
Broomielaw,	... 23·3	Mile-end, ...	20·5
Calton, ...	21·8	Dalmarnock, ...	19·4
Cowcaddens,	... 21·7	Hutchesontown, ...	19·4
Blackfriars,	... 21·2	Whitevale, ...	18·8
City,	=		17·5

### DEATHS OF NON-RESIDENTS.

In accordance with the instructions of the Local Government Board regarding the transference to the place of usual residence of the deaths of persons occurring elsewhere, 645 deaths were accepted as belonging to Glasgow, but these do not appear among the Glasgow deaths as published by the Registrar-General, and are not included by the Medical Officer in calculating the death-rate. There is nothing equivalent to them in past local records, and in many cases absence of information as to the interval elapsing between the time when residence in Glasgow ceased and when death occurred impairs any statistical value these transfers might have. Details are contained in Appendix Table XII., where it will be seen that 8 of these deaths are ascribed to common infectious diseases, 1 to influenza, 33 to pneumonia, and 35 to violence—almost one-eighth, that is, which on the most superficial scrutiny may be set down to causes which are distinctly local in their origin, and have nothing whatever to do with the conditions under which these persons lived while resident in Glasgow.

### CAUSES OF DEATH.

In Appendix Table XIII., the death-rates from several causes in 1911 and 1912 are compared. The rate from all causes in 1912 was 177 per million less than in 1911. The principal decrease occurs among diseases of the zymotic group. Whooping-cough shows a decrease of 490 per million, and diarrhoea and enteritis a decrease of 391 per million, while there are also decreases in connection with scarlet fever, enteric fever, and cerebro-spinal fever. On the other hand, measles shows an increase of 289 per million, and diphtheria 11 per million.

Among tuberculous diseases there is a decrease of 37 per million. The death-rate from tuberculous diseases other than phthisis declined by 50 per million, while phthisis showed an increase equal to 13 per million over the preceding year.

The remaining groups—cancer (malignant disease), diseases of nervous system, diseases of circulatory system, and respiratory diseases—show increases. Among the latter, pneumonia shows an increase of 138 per million, while the other respiratory diseases show an increase of 31 per million occurred. Among unclassified causes of death there is an increase of 22 per million.

### AGE DISTRIBUTION OF DEATHS FROM SEVERAL AND ALL CAUSES.

Appendix Table XIV. shows the deaths from all causes at several age periods. The age grouping now shown is similar to that of last year, and is more detailed than in years previous to 1911.

Of the total deaths occurring, 21 per cent. were of infants under one year, while fully 35 per cent. were of children under five years. Both are below the proportions occurring at these ages last year.

Deaths from diseases of the respiratory system still form a large proportion of the total; including pneumonia, bronchitis, croup, and influenza, they number 2,565. There were also 1,034 deaths from phthisis. The deaths from respiratory diseases are in excess of the number recorded in the previous year—2,565 against 2,449—and with phthisis they are more than twice the number of deaths occurring from all the diseases included within the principal zymotic group. They indicate more accurately than the zymotic rate the conditions which prejudicially affect the health of the inhabitants.

### DEATHS OCCURRING IN INSTITUTIONS.

The Local Government Board, in their instructions to Medical Officers for the preparations of Reports, asked last year, for the first time, to be informed as to the number of deaths occurring in Institutions within the

Burgh, *i.e.*, in poorhouses, lunatic asylums, hospitals, sanatoria, and nursing homes, and Appendix Table LVII. gives this information arranged according to groups of diseases and in Municipal Wards.

The total number of deaths registered during the year and belonging to Glasgow was 12,760, and of these 3,603, or 28·2 per cent., occurred in Institutions for the treatment of the sick. The proportion of institutional to the total deaths in each group indicates generally the proportion of cases which require institutional treatment when severe illness arises.

The following summary affords a comparison of the proportion in the various groups of diseases:—

GLASGOW, 1912.—TABLE SHOWING TOTAL DEATHS, DEATHS OCCURRING IN INSTITUTIONS, AND THE LATTER AS A PERCENTAGE OF THE TOTAL.

Cause of Death.	Total Deaths.	Number Occurring in Institutions.	Percentage in Institutions.
Zymotic Diseases, ... ..	1,080	445	41·2
Smallpox, ... ..	...	...	...
Diphtheria and Membranous Croup, ... ..	182	163	89·5
Enteric Fever, ... ..	40	36	90·0
Typhus Fever, ... ..	2	2	100·0
Scarlet Fever, ... ..	73	68	93·1
Cerebro-Spinal Fever, ... ..	21	7	33·3
Measles, ... ..	521	117	22·5
Whooping-cough, ... ..	241	52	21·6
Digestive Diseases, ... ..	832	247	29·6
Diarrhoea and Enteritis, ... ..	397	73	18·3
Others, ... ..	435	174	40·0
Septic Diseases, ... ..	177	124	70·0
Puerperal, ... ..	50	41	82·0
Erysipelas, ... ..	44	27	61·4
Others, ... ..	83	56	67·5
Tuberculous Diseases, ... ..	1,545	578	37·4
Phthisis, ... ..	1,034	434	42·0
Tuberculous Meningitis, ... ..	214	63	29·4
Abdominal Tuberculosis, ... ..	154	24	15·6
Others, ... ..	143	57	39·9
Cancer, ... ..	731	242	33·1
Rheumatic Fever, ... ..	9	2	22·2
Diseases of Nervous System, ... ..	1,243	262	21·1
Meningitis not Tuberculous, ... ..	152	31	20·4
Cerebral Hæmorrhage, ... ..	621	137	22·1
Others, ... ..	470	94	20·0
Diseases of Circulatory System, ... ..	1,487	473	31·8
Respiratory Diseases, ... ..	2,607	532	20·4
Pneumonia, ... ..	1,378	298	21·6
Bronchitis, ... ..	921	176	19·0
Croup, ... ..	30	3	10·0
Influenza, ... ..	42	3	7·1
Others, ... ..	236	52	22·0
Violence, ... ..	409	174	42·5
Premature Birth, ... ..	458	50	10·9
Uncertified, ... ..	51	1	2·0
All Other Causes, ... ..	2,131	473	22·2
All Causes, ... ..	12,760	3,603	28·2

Among diseases of the zymotic class the proportion of deaths occurring in Institutions is over 41 per cent. In typhus fever, scarlet fever, enteric fever, and diphtheria, where the major portion of the cases occurring are removed for treatment, the proportion of deaths in hospital is correspondingly high, being about 90 per cent. for scarlet and enteric fever and diphtheria.

Among septic diseases the proportion of deaths in Institutions was equal to 70 per cent., 41 out of 50 deaths from puerperal fever having occurred in hospitals.



In tuberculous diseases the proportion dying in Institutions is over 37 per cent., the proportion among phthisis alone being 42 per cent.

#### EFFECT OF LOW TEMPERATURE (WITH AND WITHOUT FOG) ON DEATH-RATE.

During the early part of the year the effect of low temperature on the death-rate, in the first instance when there was no fog, and in the second in association with fog, are related in the following extracts from Reports submitted from time to time to the Committee on Health:—

*Extract from Minute of 14th February, 1912.*

#### INFLUENCE OF LOW TEMPERATURE ON DEATH-RATE WHEN NO FOG PRESENT.

It rarely happens that an opportunity occurs of observing the effect on the death-rate in Glasgow of sustained low temperatures without the concomitant of fog, so that the experience of the fortnight ending 10th instant is of some interest. In the first week of this period 340 deaths were registered, and in the second week 400, representing rates of 22·6 and 26·6 per 1,000 respectively. No rate at all comparable with this has occurred since the closing weeks of 1909, when in the forty-eighth week it was 33. In the forty-seventh week of that year the mean temperature was 30·7 degrees, and a precisely similar temperature was recorded in the first week of the present fortnight. But in the forty-seventh week of 1909 there was continuous and dense fog extending over several days, and only 4·6 hours sunshine, while in the week ending February 3rd, 18 hours of sunshine were recorded. By contrast, 547 deaths were registered in the forty-eighth week of 1909, against 400 last week.

During the 1909 fortnight the deaths from pulmonary diseases alone were equal to a rate of 14·2 per 1,000 living, and constituted 49 per cent. of the total deaths. In the present fortnight they represented a rate of only 6·4, and formed 28 per cent. of the total deaths, and the contrast may serve to illustrate the asphyxiating effect of fog when associated with continued low temperatures.

*Extract from Minute of 11th December, 1912.*

#### INFLUENCE OF CONTINUED LOW TEMPERATURE ACCOMPANIED BY FOG.

The death-rate for the week ending 7th December, calculated on the total number of deaths occurring within the old area of the City and on the population thereof as estimated to the middle of the year, was 27·1 per thousand. When adjusted for Institutions and otherwise it becomes 25·6, and as thus stated may be compared with a rate of 19 for each of the weeks preceding, and with 17 for the corresponding weeks of last year.

The contrast affords illustration of the results of low temperature when combined with fog, even when these are of a limited duration.

In the week under review the deaths rose from 289 to 385, those of children under 5 from 118 to 157, and of persons over 60 years from 66 to 102.

Respiratory diseases, which in the week ending 30th November had numbered 78, rose to 115, which was equal to 34 per cent. of the total deaths, and a rate of 6·6 per thousand of the population.

Having in recollection the experience of the week ending 10th February last, when we had prolonged low temperature but no fog, our recent experience serves to mark how rapidly fog and low temperature, when combined even for a short period, are disastrous alike to persons at both extremes of life.

#### DEATH-RATES IN RELATION TO HOUSING.

A special inquiry was instituted during the year into the death-rates in relation to housing, and the results were embodied in a paper read before the Royal Society of Medicine (Section of Epidemiology and State Medicine), and forms Appendix II.



### INFANT MORTALITY.

2,667 deaths of infants under one year occurred during 1912, which is equal to a death-rate of 122 per 1,000 births. This is 14 per 1,000 under the rate for last year, and is only 3 above that for 1910, which was the lowest on record. The decrease in the rate for the present year may be ascribed to the low temperatures and heavy rainfall which prevailed during the summer and autumn, when diarrhœa is especially prevalent among infants.

Of these deaths, 2,394 were of legitimate and 273 of illegitimate children, representing rates of 118 and 185 respectively per thousand births of each class. For several years the death-rate for each class has been as follows:—

#### DEATH-RATE PER 1,000 BIRTHS.

			Legitimate.		Illegitimate.
1899,	...	...	143	} 137	286
1900,	...	...	145		286
1901,	...	...	141		269
1902,	...	...	126		244
1903,	...	...	132		298
1904	...	...	131	} 124	342
1905,	...	...	122		263
1906,	...	...	122		244
1907,	...	...	122		229
1908,	...	...	129		238
1909,	...	...	124		214
1910,	...	...	111		233
1911,	...	...	127		260
1912,	...	...	118		185

In each class there is considerable improvement when compared over a series of years, and it is a reasonable expectation that still further reduction will result from the increased facilities for supervision which the provisions of the Notification of Births Act and of the Children Act afford.

For both classes during several periods the death-rate has been as follows:—

Average of 5 years, 1886-90, = 143 per 1,000 births.

„	1891-95, = 146	„
„	1896-1900, = 151	„
„	1901-1905, = 139	„
„	1906-1910, = 129	„
„	1911, = 136	„
„	1912, = 122	„

Compared with several large towns, the infantile mortality in 1902-11 is as follows:—\*

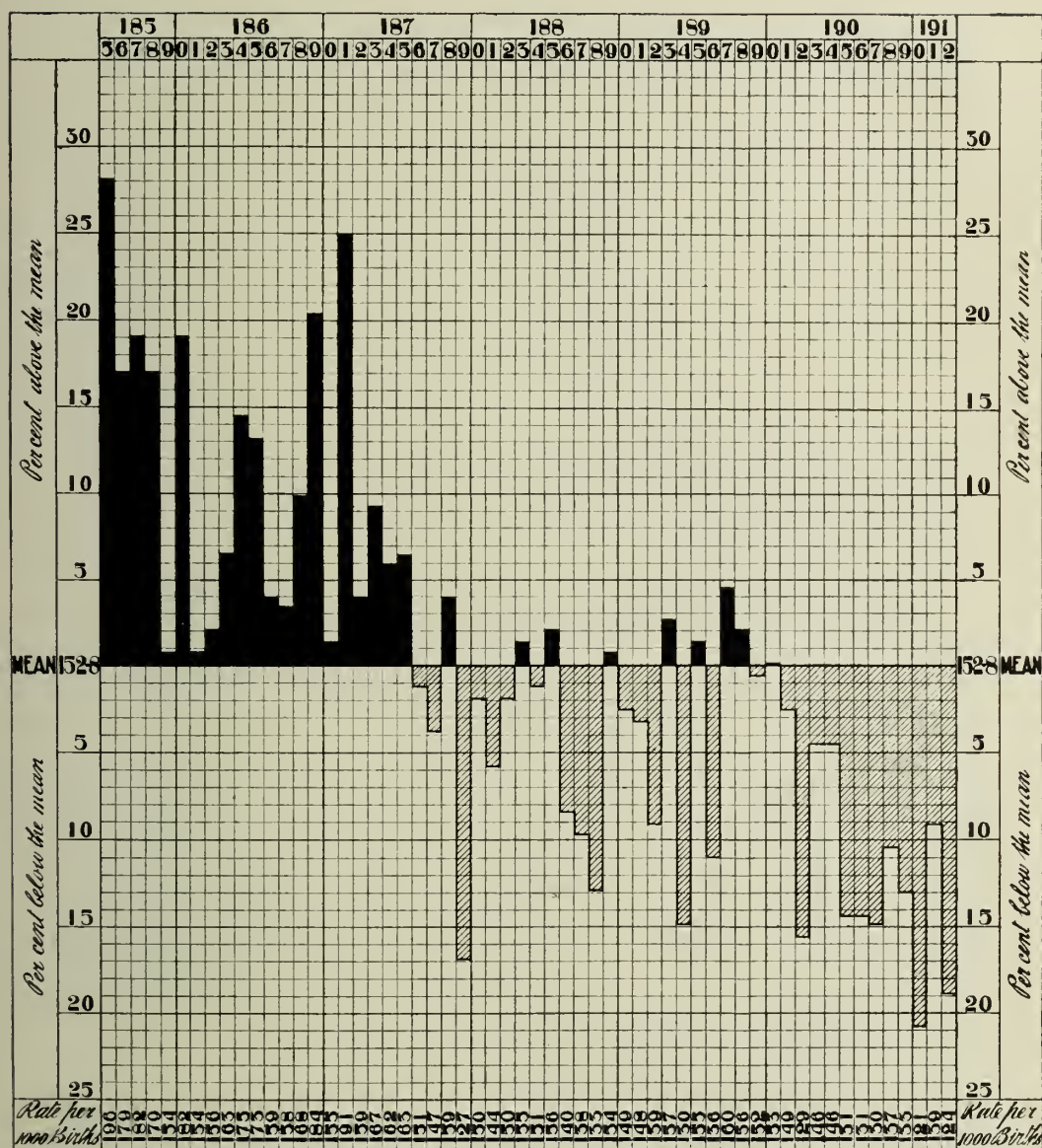
						1902-1911.	1912.
Glasgow,	...	...	...	...	...	134	†
Edinburgh,	...	...	...	...	...	122	
Dundee,	...	...	...	...	...	153	
Aberdeen,	...	...	...	...	...	135	
Paisley,	...	...	...	...	...	120	
Greenock,	...	...	...	...	...	119	
London,	...	...	...	...	...	125	91
Liverpool,	...	...	...	...	...	157	125
Manchester,	...	...	...	...	...	155	121
Birmingham,	...	...	...	...	...	155	112

† Figures not available.

In the accompanying chart the infantile death-rate in each year since 1855 is expressed as a percentage above or below the mean for the whole period 1855-1912.

\* From Registrar-General's Annual Reports.

# INFANTILE MORTALITY 1855-1912.





Considerable variation in the rate occurs in the several Wards of the City, and the mean of several years is necessary to obtain an approximately accurate rate where the number of births occurring annually is small. Details for each Ward for the years 1903-12 will be found in Appendix Table XV., and a comparison of the rates shown in this Table with the death-rates from "All Cause" in Appendix Table VII. shows that most of the Wards with death-rates from all causes in excess of the mean for the City present also the highest infantile death-rates. For convenience of reference these rates for the present year are shown in the Table which follows:—

GLASGOW, 1912.—GENERAL DEATH-RATE AND INFANTILE MORTALITY  
RATE COMPARED.

Wards.	Death-rate from all Causes.	Wards.	Infantile Mortality.
Broomielaw, ..	22·4	Exchange, ...	200
Blackfriars, ...	22·1	Blackfriars, ...	178
Calton, ...	21·1	Calton, ...	163
Mile-end, ...	19·3	Whitevale, ...	151
Cowcaddens, ...	19·0	Mile-end, ...	148
Whitevale, ...	18·4	Townhead, ...	145
Townhead, ...	17·2	Kinning Park, ...	138
Anderston, ...	16·8	Gorbals, ...	130
Hutchesontown, ...	16·7	Cowcaddens, ...	126

Details of the causes of death among infants during 1912 are contained in Appendix Tables XVI. and XVII., but for convenience of reference the group death-rates for a number of years have been summarised in that which follows:—

GLASGOW.—INFANTILE MORTALITY.—DEATH-RATES IN GROUPS PER THOUSAND  
BIRTHS FOR THE YEARS 1903-12, AND AVERAGE RATES. 1903-5 AND 1906-10.

MALES.

CAUSES OF DEATH.	Average 1903-5.	Average 1906-10.	1911.	1912.
I. Immaturity, ... ..	49	44	45	43
II. Diseases of Respiratory System, ... ..	36	29	29	32
III. Diseases of Digestive System,	24	23	28	18
IV. Diseases of Nervous System,	16	11	8	10
V. Tuberculous Diseases, ...	6	6	7	6
VI. Infectious Diseases, ... ..	15	17	17	14
VII. Suffocation, ... ..	1	2	2	2
VIII. All other Causes, ... ..	7	7	14	12
All Causes, ...	154	139	150	137

FEMALES.

CAUSES OF DEATH.	Average 1903-5.	Average 1906-10.	1911.	1912.
I. Immaturity, ... ..	39	36	35	34
II. Diseases of Respiratory System, ... ..	28	23	24	25
III. Diseases of Digestive System,	20	19	21	14
IV. Diseases of Nervous System.	12	9	8	8
V. Tuberculous Diseases, ...	5	5	5	4
VI. Infectious Diseases, ... ..	15	17	18	12
VII. Suffocation, ... ..	1	2	1	2
VIII. All other Causes, ... ..	4	7	10	8
All Causes, ...	124	118	122	107



On the basis of the ten years for which the deaths have been analysed in this manner it is possible to consider the relationship of the various groups to each other, and the columns showing the average rates for the years 1903-1905 and 1906-1910 afford a ready means of doing so.

The diseases contained in the group "Immaturity" constitute the largest individual portion of the infant death-rate, and represent a mean rate varying between 49 and 43 per 1,000 male births, and between 39 and 34 per 1,000 female births. Under existing circumstances this is to be regarded as an irreducible part of the infant death-rate—irreducible at least until the causes which prejudicially affect gestation are better known. There is some reason for thinking that among the poorest of the population the proportion of fat and carbohydrates in their dietary is insufficient.

It will be observed that the death-rate among males is uniformly in excess of the females when comparing each individual year. The average death-rate for males during the years 1903-5 was 154, and for 1906-10 139, while the corresponding rates for females were 124 and 118. The rates for 1912 are considerably below those for 1911, the greatest decreases being shown in digestive and infectious diseases.

The death-rates of the immaturity class show a gradual if fluctuating decrease for the period covered by the Table, receding from 50 for males and 40 for females to 43 and 34, respectively, for last year.

Deaths of this class occur mainly in the first four weeks of infant life, and have been made the subject of a special inquiry, which was submitted to the Hygiene and Public Health Section of the 17th International Congress of Medicine in August, 1913, and will be included in the Report for that year.

#### NOTIFICATION OF BIRTHS ACT, 1907.

During the year 1912, 22,044 infants were registered as having been born alive within the City. In this number are included 232 births properly belonging to other districts, which have been excluded from the figures on which the rates shown in Appendix Table VI. are based.

Under the Notification of Births Act, 22,768 births were notified, including 899 still births. The ratio of live births notified to those registered is thus 99·2 per cent., as compared with 99·2 per cent. in 1911 and 98·8 per cent. in 1910.

While this result may be regarded as satisfactory, it has to be explained that in 671 cases notification had not been made in terms of the Act, and a notice was in each case issued directing attention to the omission. In response to these notices, 585 notifications were subsequently received, and are included in the figures already quoted. The provisions of the Act were thus voluntarily complied with in 97·4 per cent of the births, and in 2·2 per cent. as the result of the action taken. 86 other births were not found at the addresses from which they had been registered.

#### NATURE OF ATTENDANCE AT BIRTH.

Appendix Table XIX. shows that, of the 22,768 live and still births notified, 10,517, or 46·2 per cent., were attended medically, either at home or in institutions while 12,251, or 53·8 per cent., had no medical attention. These ratios are approximately the same as in previous years.

The number of births attended medically varies greatly in the several Wards, the maximum of 97·1 per cent. being reached in Langside, and the minimum of 22·4 per cent. in Broomielaw. In fifteen out of the twenty-six Wards the proportion of births not medically attended exceeded the mean of 53·8 for the City, five Wards having rates under 60 per cent., six between 60 and 70 per cent., while in Broomielaw, Cowcaddens, Calton, and Blackfriars the rates exceeded 70 per cent. in the order named.

Scotland is still without the advantages of a Midwives' Act, although a Bill has been presented in several years in succession by Mr. Burns. No complete register of midwives practising in Glasgow can be made, but, excluding midwives belonging to the Maternity Hospital and other Institutions in the City, a list of 357 names has been prepared, mostly from information contained in the notification cards, which shows that 161 certified, and 196 uncertified, are in more or less regular practice.

#### STILL-BIRTHS.

As already stated, the number of still-births notified during the year was 899, which is equal to 4·1 per cent. of the live births notified, as compared with 4·2 per cent. and 4·0 per cent. in the two preceding years.

Excluding the still-births in institutions, and comparing only those occurring at home, the percentage to births medically attended is equal to 3·7, and in births non-medically attended to 3·0. In the preceding year the proportions were 3·8 and 3·2 per cent. respectively. While there is every reason to believe that medical men are notifying the still-births occurring under their care, many midwives, it is believed, still fail to do so, and until some system of registration of still-births is instituted, we shall probably always lose a proportion of the numbers actually occurring. The Ward details are shown in Appendix Table XX.

#### INFANT VISITATION.

Under the scheme of infant visitation, a female inspector visits every house in which a birth has occurred, provided we have not been informed that a medical practitioner is in attendance. 13,557 enquiry cards were accordingly issued to the female inspectors during the year. Of these, 28 proved to be duplicate notifications, while 782 were not visited for various reasons—principally because, although the notification did not bear that a medical practitioner was in attendance, the district was not of a character which suggested that visitation was necessary. 91 had removed from the address given before the inspector called, while in 162 others doctors were found to be in attendance. There thus remained 12,494 children not medically attended at birth who received at least one official visit after notification.

Certain information in regard to these latter children is shown in the following summary:—

					Number.	Per Cent.
Legitimate,	...	...	...	...	11,862	94·9
Illegitimate,	...	...	...	...	632	5·1
					<hr/> 12,494	<hr/> 100·0
Born at Full Term,	...	...	...	...	11,916	95·4
Premature Births,	...	...	...	...	578	4·6
					<hr/> 12,494	<hr/> 100·0

#### *Condition of Infant at Birth.*

					Number.	Per Cent.
Well nourished,	...	...	...	...	10,572	87·6
Fairly nourished,	...	...	...	...	1,095	9·1
Badly nourished,	...	...	...	...	406	3·3
					<hr/> 12,073	<hr/> 100·0
Still-born,	...	...	...	...	421	
					<hr/> 12,494	<hr/>

*Nature of Feeding at First Visit.*

	Number.	Per Cent.
Breast, ... ..	11,240	95·4
Artificial, ... ..	440	3·7
Breast and Artificial, ... ..	107	0·9
	<hr/>	<hr/>
	11,787	100·0
Still-born, ... ..	421	<hr/>
Dead at First Visit, ... ..	286	
	<hr/>	
	12,494	
	<hr/>	

Of the children thus visited for the first time by a member of the Female Staff, 87·6 per cent. were found to be well nourished, 9·1 per cent. were fair only, 3·3 per cent. were badly nourished.

286 children were found to have died before the Inspector visited, but of the 11,787 found alive at first visit fully 95 per cent. were being breast-fed, while for the remainder the problem of artificial feeding had already begun.

Practically one-third of the deaths occurring in Glasgow among children under one year of age arise from immaturity, a condition which after-care can do little to remedy.

As already stated, all newly born infants not medically attended at birth are visited immediately after notification by a female Inspector, who submits a report on the circumstances of each case. In 3,049 of these children the conditions were regarded as satisfactory, and supervision was not continued. The information contained in the report card, however, in regard to the remaining 9,445 children suggested that further observation was desirable, and these were accordingly taken up by the Health Visitors. The Health Visitors are trained nurses, who hold in addition the Certificate of the Central Midwives Board, and their duties are to advise mothers as to the feeding, &c., of infants, and in such cases as require medical advice to urge that the children be brought to the infant consultations.

Altogether the Health Visitors made 20,244 home visits during the year, with the following results:—

	First Visits.	Revisits.
Infants visited under one year of age, ...	7,694	7,690
Infants visited over one year of age, ...	81	93
	<hr/>	<hr/>
	7,775	7,783
Removed and new address not traced, ...	206	535
Not found at address given, ... ..	106	—
Out at time of visit, ... ..	946	1,846
In hospital or nursery, ... ..	38	130
Dead, ... ..	157	224
Nurse still attending, ... ..	141	11
Refused admittance, ... ..	15	8
Doctor in attendance, ... ..	17	—
Visits to mothers, ... ..	2	240
Unable to gain admission, ... ..	3	22
Still-born, ... ..	39	—
	<hr/>	<hr/>
	9,445	10,799
	<hr/>	<hr/>



Of the children found alive on the occasion of the first visit by the Health Visitor, 3,472 were classified as being well, 3,501 were regarded as fair only, while 802 were in bad condition. These may be summarised according to the size of the house occupied, as follows:—

	Well.	Fair.	Bad.	Total.
1 apartment, ... ..	1,598	1,626	350	3,574
2 apartments, ... ..	1,721	1,742	419	3,882
3       „       ... ..	132	120	27	279
4       „       and up,	21	13	6	40
	<u>3,472</u>	<u>3,501</u>	<u>802</u>	<u>7,775</u>

Generally speaking, those classified as “well” on the occasion of the first visit were not revisited, but those tabulated as “fair” and “bad” were kept under observation by the nurses, and the following Table shows a summary of the results. The second or subsequent visits total 7,783 to 4,303 children, or an average of about 2 visits to each child.

#### VISITS.

	Much Improved.	Slightly Improved.	No Improvement.	Worse.
Fair, ... ..	1,528	1,992	1,078	257
Bad, ... ..	<u>744</u>	<u>1,148</u>	<u>945</u>	<u>91</u>
	<u>2,272</u>	<u>3,140</u>	<u>2,023</u>	<u>348</u>

The number of visits paid to each house depended on the urgency of the conditions, and where the nurse failed in her efforts to effect an improvement the cases were reported either for prosecution in respect of the dirty condition of the house, or to the Glasgow and Govan Parish Councils, in order that action might be taken under the Children Act in respect of the continued neglect of the children. During the year 83 cases were so reported to the Parish Councils, who under the greater powers possessed by them and their ability to take action under the Children Act were successful in many instances in effecting an improvement. The following extracts from reports to me by the Clerk to the Glasgow Parish Council illustrate the conditions in some of the cases:—

*28th June, 1912.* ———, *Shuttle Lane.*—“ . . . . The case has been well known here since October last, and has always been unsatisfactory. It is practically certain that, but for the fact that the Settlement appears to be in Govan Parish, and the delay consequent on my endeavours to establish, that the father would have been prosecuted ere this. He is working in Hamilton, and has failed to contribute sufficient to the needs of his wife and family, and his record otherwise is bad.

“It appears, however, that as a result of the visits and warnings of my Assistants, there has been an improvement in the state of the children during the past few months, especially the infant. I have again warned the father, and if he fails to attend to it, I will endeavour to persuade Mr. Mitchell to prosecute.”

*3rd September, 1912.* ———, *Fordneuk Street.*—“ . . . . The case has had my careful consideration and attention, and I have offered to take the wife and family into Stobhill for a time, which offer so far has been declined.

“ . . . . Meanwhile, however, as a result of the visits that have been made, there appears to be a decided improvement in the home conditions, and the man has promised, if the present medical treatment they are receiving does not give satisfactory results in a week, to accept my offer of Hospital.”

*10th February, 1913.* ———, *Marlborough Street.*—“ . . . . On the above case being visited on 6th instant, the house and children were found in a deplorable condition. The mother was then cautioned. Another visit was made on 8th instant, when a little improvement had been made in the condition of the

children, and an attempt to clean the house. On same day at 10 p.m. the house was again visited, and an entire change had been made, the house clean, and the children much tidier. The children, I am informed by our Medical Officer, are stunted and rickety. . . . .

“The house will, however, be visited from time to time.”

17th April, 1913. —, Weaver Street.—“. . . . . The above-named man and wife were brought to this office yesterday and severely cautioned as to their general conduct and neglect of children. They have now promised to improve matters, otherwise we would be compelled to take proceedings against them.”

GLASGOW INFANT HEALTH VISITORS' ASSOCIATION.

Working in association with the Public Health Department is the Glasgow Infant Health Visitors' Association, to whom are reported children whom it is desirable to keep under observation during a longer period than is possible by the official Visitors. As this period generally extends to the first twelve months of life, a complete year must elapse before the results of the visitation can be summarised. Of infants born during the year 1911, 1,874 were reported to the Voluntary Visitors, so that the last of the infants attained the age of one year by the end of 1912. A summary of the results as at that date in the several Wards in which visitation is carried on is shown in the following Table:—

Wards.	Year old.	Removed.	Dead.	Ceased to be Visited.	Visits Un-necessary.	No In-formation.	Visits Resented.	No Visitor.	Total.
1	23	12	7	5	1	...	...	1	49
2	31	40	13	12	8	8	...	2	114
3	86	111	29	9	3	2	...	...	240
4	16	14	7	1	...	...	...	...	38
6	26	14	15	5	1	...	...	...	61
8	10	23	12	1	7	...	...	...	53
9	6	9	5	...	5	...	...	...	25
9A	17	21	10	...	7	...	...	...	55
10	1	...	...	...	...	...	...	...	1
12	15	14	5	2	...	...	...	...	36
13	99	42	24	1	4	...	2	...	172
14	62	31	18	5	3	...	...	...	119
16	156	91	30	1	3	...	2	...	283
17	45	32	23	...	...	...	1	...	101
18	20	35	3	1	11	1	...	...	71
19	63	34	20	5	1	...	...	...	123
20	55	48	16	...	...	3	...	...	122
25	64	25	17	1	1	...	1	...	109
26	29	18	9	6	6	26	...	8	102
	824	614	263	55	61	40	6	11	1,874

The difficulty of keeping these infants under continuous observation is illustrated by the large proportion under the heading “Removed,” of whom there were no fewer than 614. In 173 other cases the child was either not visited at all—principally because of the lack of visitors to undertake the work—or visitation was discontinued after a short interval.

The above Table may be summarised shortly as follows:—

Attained the age of one year,	...	...	...	824
Died during first year,	...	...	...	263
Removed,	...	...	...	614
Visits discontinued,	...	...	...	133
No information,	...	...	...	40
				<hr/> 1,874 <hr/>

Notwithstanding the frequently unsatisfactory and discouraging conditions under which the work of the Voluntary Visitors is conducted, the result is full of encouragement for the Association.

For example, out of the total 1,874 children referred to the Voluntary Visitors, 263 died during the first year, which represents a death-rate of 140 per 1,000, as compared with the average for the city as a whole of 122 in 1912, and 136 in 1911. This rate is in some instances in excess of the rates prevailing in the Wards in which visitation is being conducted, but it must be remembered that the children are selected for visitation because of the presence of unsatisfactory conditions which produce high rates.

A statement of the ratio between deaths and children visited, however, is not calculated to represent in any sense the most abiding work of the Association. The good which is done is by inspiring, stimulating, and encouraging the mothers even in such simple matters as domestic hygiene.

The following Table shows the nature of the feeding of the 1,874 children referred to above, so far as this information was available. The figures given under the respective columns indicate the last information available as to feeding:—

	- 3 Months.	- 6 Months.	- 9 Months.	- 12 Months.	12 Months +	No In- formation.	Total.
Year old—							
Breast only, ...	...	...	...	...	199	...	199
Breast and Artificial Food, ...	...	...	...	...	407	...	407
Artificial Food only, ...	...	...	...	...	218	...	218
Removed—							
Breast only, ...	75	127	58	47	...	...	307
Breast and Artificial Food, ...	7	30	21	17	...	...	75
Artificial Food only, ...	3	11	7	9	...	...	30
No Information, ...	...	...	...	...	...	202	202
Dead—							
Breast only, ...	14	30	20	13	...	...	77
Breast and Artificial Food, ...	3	18	16	9	...	...	46
Artificial Food only, ...	3	16	12	11	...	...	42
No Information, ...	...	...	...	...	...	98	98
Ceased to be visited—							
Breast only, ...	3	8	7	16	...	...	34
Breast and Artificial Food, ...	...	3	2	5	...	...	10
Artificial Food only, ...	...	...	3	8	...	...	11
Visits unnecessary—							
Breast only, ...	6	13	12	4	...	...	35
Breast and Artificial Food, ...	2	2	3	3	...	...	10
Artificial Food only, ...	2	3	3	...	...	...	8
No information, ...	...	...	...	...	...	8	8
No Information, ...	...	...	...	...	...	40	40
Visits resented—							
Breast only, ...	...	...	...	...	...	...	...
Breast and Artificial Food, ...	...	...	...	...	...	...	...
Artificial Food only, ...	...	...	...	...	...	...	...
No Information, ...	...	...	...	...	...	6	6
No Visitors, ...	...	...	...	...	...	11	11
	118	261	164	142	824	365	1,874

3,026 of the children born during 1912 were reported to the Voluntary Visitors, but in regard to these the results will not be available until the end of the current year.



## INFANT MORTALITY IN RELATION TO THE INDUSTRIAL OCCUPATION OF WOMEN.

The practice, which has been in operation since the adoption of the Notification Act, of reporting to H.M. Inspector of Factories and Workshops all births notified in which information is obtained that the mother was employed, was continued during last year, 1,326 having been intimated. Of these, 889 were in respect of legitimate births, and 437 in respect of illegitimate births.

### CHILDREN ACT, 1908.

Reference has been made in previous years to the existence in the City of a number of private lying-in houses. During 1912, births, numbering in all 127, were recorded in twelve of these. Most of these children are illegitimate, and immediately after birth are handed over to the care of foster-parents. All such births are reported to the Parish Authorities, who keep careful supervision over the children. The question arises, however, whether these houses should not be registered and placed under supervision.

Reference has already been made to the number of children reported to the Poor Law Authorities because of the neglect of their parents and the action which has followed thereon.

### INFANT CONSULTATIONS.

350 Consultations for Infants were held at eight centres during the year, 1,613 children having attended 4,555 times, an average of 2·8 visits per child.

Details of the consultations, and the number of children attending each, during the year, are shown in the following Table:—

No. of Consultations	Place.	First Attendance.	Subsequent Attendances.	TOTAL.	Average Attendance per Child.
49	Maitland Street, ...	294	447	741	2·5
46	South Portland Street, ...	326	514	840	2·6
46	Franklin Street, ...	223	517	740	3·3
48	Sanitary Chambers, ...	170	418	588	3·5
47	Washington Street, ...	168	264	432	2·6
49	Garngad Hill, ...	117	265	382	3·3
49	Soho Street, ...	292	495	787	2·7
16	Main Street, ...	23	22	45	2·0
350		1,613	2,942	4,555	2·8

Of the 1,613 children attending the infant consultations during the year, 618 were found to be in "good health," 474 were classed as "fair"

only, while 521 were "bad." Those classed as "bad" suffered as follows:—

Birth debility, ... ..	110	<i>Forward</i> , ... ..	448
Prematurity, ... ..	30	Blepharitis, ... ..	2
Debility and Marasmus, ... ..	6	Conjunctivitis, ... ..	1
Congenital Defects (Hydrocephalus,		Diphtheria, ... ..	1
5; Hare-lip and Cleft-palate, 4;		Measles, ... ..	4
Cleft-palate, 1; other Malforma-		Whooping-cough, ... ..	2
tions, 8; Heart Disease, 1; Hernia		Chickenpox, ... ..	6
and Phimosis, 9; Spina bifida, 2),	30	Poliomyelitis, ... ..	1
Digestive Disorders (Improper feed-		Meningitis, ... ..	2
ing, 37; Gastritis, 15; Diarrhœa,		Imbecile, ... ..	2
6; Constipation, 1; Dentition, 3;		Neglect, ... ..	18
Enteritis, 6; Aphthous Stomatitis 2),	68	Icterus, ... ..	1
Respiratory Diseases (Bronchitis,		Pustular Eruption, ... ..	2
35; Broncho-pneumonia, 3), ...	38	Pemphigus, ... ..	2
Rickets, ... ..	43	Other Skin Affections, ... ..	13
Tuberculosis, ... ..	17	Otitis Media, ... ..	2
Syphilis, ... ..	59	Others, ... ..	14
Ophthalmia neonatorum, ... ..	47		—
			521
<i>Forward</i> , ... ..	448		—

#### OPHTHALMIA NEONATORUM.

In the foregoing Table it will have been observed that of the children brought to the infant consultations, and whose state of nutrition was classified as "bad," 106, or 21·5 per cent., suffered from the results of venereal disease, 47 having ophthalmia neonatorum, and 59 being affected with congenital syphilis.

In April, 1911, a Report was submitted to the Committee on Health on ophthalmia neonatorum, showing the prevalence of the disease in Glasgow, and the facilities for treating it. Consequent on that Report the Corporation decided to add ophthalmia neonatorum to the list of the compulsory notifiable diseases, and this took effect as from 1st August of that year.

A Report prepared by Dr. Mann, showing the results of treatment of cases of this disease since notification became compulsory until the end of the present year, forms Appendix III.



## SECTION II.

## INFECTIOUS DISEASES.

During the year, 30,411 cases of infectious disease were registered and dealt with by the Department. This represents an attack-rate equal to almost 39 per 1,000 of the population, which is 3 per 1,000 more than the rate for 1911. Of the total cases registered, 7,978, or 26·2 per cent., were treated in hospital.

The varying rates of incidence in the several Wards are shown in Appendix Table XXII., but it must be remembered that these afford an accurate attack-rate only for those diseases which are notifiable under the Infectious Disease (Notification) Act. On the other hand, measles and whooping-cough are grouped with chickenpox, and a small number of cases of other diseases in the column "All others," and the rates given indicate only the cases known and dealt with. It may be further remarked that all the Ward rates in Table XXII., with the exception of that for phthisis, are calculated on populations which include the institutional population in each Ward. In the case of phthisis, however, the institutional cases and populations have been excluded in calculating the Ward rates, although both are included when calculating the rate for the City as a whole.

The composition of the rate for the past nine years is shown in the following Table:—

GLASGOW.—CASE-RATE PER MILLION OF THE POPULATION FOR CERTAIN ZYMOTICS  
AND FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED, 1903-12.

YEAR.	Typhus Fever.	Enteric Fever.	Continued and Undefined.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Group.	Cerebro-Spinal Fever.	Phthisis.	All Others.	TOTAL.
1903,	41	1,207	22	138	373	2,597	926	...	216	15,560	21,080
1904,	34	800	39	113	1,108	2,003	824	...	998	14,875	20,794
1905,	67	569	37	137	5	1,235	924	...	1,659	20,379	25,013
1906,	12	483	76	148	4	1,721	1,580	255	1,648	17,819	23,746
1907,	6	583	36	151	1	2,180	1,510	1,237	1,619	18,945	26,268
1908,	16	741	25	149	2	3,491	1,590	300	1,531	25,223	33,068
1909,	32	707	20	135	...	5,510	2,306	101	1,483	24,841	35,135
1910,	19	427	29	142	1	5,277	2,435	58	*4,503	25,586	38,482
1911,	9	489	14	170	3	4,020	2,418	64	2,973	25,732	35,892
1912,	43	311	14	181	...	3,687	2,211	24	2,983	29,307	38,761

\* Pulmonary Tuberculosis made compulsorily notifiable.

The rate for typhus fever is the second highest rate recorded during the last ten years, although the cases only numbered 34. Enteric fever, on the other hand, was much less prevalent, the cases being considerably fewer than in any previous year. Undefined and puerperal fevers are practically the same as in 1911. The minor infectious diseases, included under the heading "All others," return the highest rate for the last ten years, the combined rate therefore being nearly 39 per 1,000. This is largely the result of a more complete method of ascertaining the presence of these diseases.

Table XXII., just referred to, enables a comparison to be made of the relative prevalence of notifiable and non-notifiable diseases in the several Wards. Taking both together, the incidence was greatest in Anderston, Maryhill, Hutchesontown, Mile-end, and Springburn Wards, in the order named, where the rates exceeded 45 per 1,000; and least in Pollokshields,

Blythswood, Kelvinside, and Kinning Park Wards, the rate in Pollokshields being slightly over 16 per 1,000, and in Kinning Park Ward fully 18 per 1,000.

The attack-rate for the notifiable diseases for the City as a whole was almost 9·5 per 1,000, as compared with 29 per 1,000 for the diseases which are not notifiable. Of the notifiable diseases 3·6 per 1,000 were due to scarlet fever, almost 3 per 1,000 to phthisis, and 2·2 to diphtheria.

The system of notification of infectious diseases by Attendance Officers of the School Board now enables the Department to register all cases of measles, whooping-cough, and chickenpox occurring in the houses of scholars.

Formerly all children in houses in which infectious disease existed were excluded from school, but the Public Health (Scotland) Amendment Act of 1907 relaxed the stringency of the Public Health (Scotland) Act, 1897, and made attendance at school in such circumstances possible where precautions are taken to guard against the spread of the disease. In order that the practice of excluding children from school may be uniform, the following forms have been drawn up in conference with the Medical Officer of the Schools, and circulated among the masters and attendance officers:—

REGULATIONS REGARDING THE EXCLUSION FROM SCHOOL OF CHILDREN IN WHOSE  
HOUSES INFECTIOUS DISEASE HAS OCCURRED.

FORM I.

When infectious disease occurs in a family and is removed to hospital, the following periods of exclusion from school of other children shall be observed:—

DISEASES.	PERIOD OF QUARANTINE.
Scarlet Fever, ... ..	14 days.
Diphtheria, ... ..	14 days, subject to swabs from throat and nose being "negative" in character where multiple cases have occurred.
Measles, ... ..	21 days in each case, but any child who has already had the disease may, in the case of Measles or Whooping-cough, return to school immediately after disinfection, if not in attendance on the Infant Department.
German Measles or Roseola,	
Whooping-cough, ...	
Chickenpox, ... ..	
Smallpox, ... ..	
Typhus Fever, ...	28 days, with exemptions similar to those under Measles and Whooping-cough.
Mumps, ... ..	
Enteric Fever, ... ..	To return to school directly after disinfection.

FORM II.

When cases are treated at home the attendance of the other children at school will be subject to the following restrictions:—

DISEASES.	RESTRICTIONS.
Scarlet Fever, ...	No scholar is to attend school from any house in which any case of these diseases is being treated, nor until the expiry of a further period after disinfection corresponding to the quarantine period of the particular disease as stated in Form I.
Membranous Croup,	
German Measles,* ...	
Chickenpox, ... ..	
Typhus Fever, ...	
Smallpox, ... ..	

\* Included here mainly because mild cases of Scarlet Fever are frequently mistaken for German Measles.

FORM II.—*Continued.*

DISEASES.	RESTRICTIONS.
Diphtheria, ... ..	As above, with the addition that where more than one case of the disease has occurred no child is to be returned to school until nasal or throat swabs have proved "negative" to culture on two occasions at least with an interval of three days.
Enteric Fever, ... ..	Where effective home isolation is possible, children may be permitted to attend school, provided they are under medical supervision in order that the early appearance of any symptoms of the disease may be detected.
Whooping-cough, ... ..	Children who have had the disease, and are not in attendance on the Infant Department, may return to school.
Measles, ... ..	
Mumps, ... ..	

## FORM III.

The duration of the infective period of the following diseases may thus be stated :—

DISEASES.	DURATION OF PERIOD OF INFECTION.
Scarlet Fever, ... ..	Not less than 6 weeks, and in no case until a fortnight has elapsed after disinfection or dismissal from hospital, provided that there is no sore throat nor discharge from the ear or nose nor any eczematous condition.
Diphtheria, ... ..	Not less than 4 weeks, provided there is an absence of skin lesion, and the throat and nose swabs have been "negative" on two occasions at least.
Measles, ... ..	Not less than 2 weeks from the appearance of the rash.
Smallpox, ... ..	When every crust has separated, special search being made in the scalp, palms, and soles.
Chickenpox, ... ..	When every crust has separated, special search being made in the scalp.
German Measles or Roseola,*...	21 days from the appearance of the rash.
Whooping-cough, ... ..	6 weeks, provided the whoop and vomiting have ceased for at least 2 weeks.
Mumps, ... ..	4 weeks from the beginning of the attack, and 1 week after the subsidence of the swellings.
Typhus Fever, ... ..	3 weeks.
Enteric Fever, ... ..	3 weeks after temperature has become normal in the evening, due regard being paid to the occurrence of carrier cases.

\* Scarlet Fever, especially when mild, is not infrequently mistaken for German Measles or Roseola. The extension of the infective period to 21 days is here made with the object of preventing the mixing with susceptible children of those concerning whom this error has occurred until the probability of the resulting desquamation has been excluded.

A. K. CHALMERS,  
*Medical Officer of Health.*

Sanitary Chambers,  
Glasgow, 31st May, 1911.



## INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

The cost per 1,000 of the population for Notification Fees since 1891 has been as follows:—

GLASGOW.—AMOUNT PER 1,000 OF POPULATION OF FEES FOR CERTIFICATES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889, FOR SEVERAL PERIODS SINCE 1891.

Period.	Amount.		
	£	s.	d.
1891-1900 (average), ... ..	1	2	4·3
1901-1905 ( „ ), ... ..	0	15	6·5
1906-1910 ( „ ), ... ..	0	19	8·2
1911, ... ..	1	6	5
1912, ... ..	1	7	8

The increased cost which is first shown in the 1906-10 average and becomes accentuated in 1911-12, is explained by the inclusion of pulmonary tuberculosis under the Notification Act in 1910, and the altered rates of payment introduced by the Pulmonary Tuberculosis Regulations, 1912.

In order to show the cost of notification, together with the monthly variation in the number of notifications received, and the proportion which “public” and “private” cases form in the totals, the following Table is inserted:—

1912.	Private.	Public.	£	s.	d.
January, ... ..	632	220	90	0	0
February, ... ..	601	258	88	0	6
March, ... ..	584	240	85	0	0
April, ... ..	454	189	66	4	0
May, ... ..	564	251	83	1	0
June, ... ..	426	204	63	9	0
July, ... ..	417	226	63	8	6
August, ... ..	678	75	88	10	0
September, ... ..	742	48	95	3	0
October, ... ..	946	59	121	4	0
November, ... ..	1,032	87	133	7	0
December, ... ..	844	70	109	0	0
1911, ... ..	7,920	1,927	1,086	7	0
	7,297	2,466	1,035	8	6
Increase, ... ..	623	...	50	18	6
Decrease, ... ..	...	539	...	...	...

The notification of phthisis under the Tuberculosis Regulations came into operation in August, 1912, and accounts almost wholly for the increase of 623 in the “private” notifications. In other words, it transferred between 500 and 600 notifications from “public” to “private” sources.

## PRINCIPAL ZYMOTIC DISEASES.

1,477 deaths occurred during the year, from the principal zymotic diseases—smallpox, diphtheria, scarlet fever, typhus, enteric, undefined fever, cerebro-spinal fever, measles, whooping-cough, and diarrhoea. This represents an annual death-rate of 1·883 per thousand living, compared with 2·544 in 1911, a decrease of 661 per million. In considering Appendix Table XIII., the diseases in connection with which this increase occurred have already been referred to on page 9. Diphtheria and measles alone of this group have a higher death-rate in 1912; the others, without exception, show lower rates.

The corresponding rates for several periods have been:—

1881-90, ... ..	3·600 per 1,000 living.
1891-1900, ... ..	3·282 „
1901-1905, ... ..	2·660 „
1906, ... ..	2·436 „
1907, ... ..	3·300 „
1908, ... ..	2·586 „
1909, ... ..	2·244 „
1910, ... ..	1·682 „
1911, ... ..	2·544 „
1912, ... ..	1·883 „

In the following Table the rates for several towns are given on the basis of the Registrar-General's tabulation:—

#### PRINCIPAL ZYMOTIC DISEASES.

	Death-rate per 100,000. 1902-1911.
<b>Glasgow,</b> ... ..	<b>187</b>
Edinburgh, ... ..	109
Dundee, ... ..	136
Aberdeen, ... ..	118
London, ... ..	172
Liverpool, ... ..	281
Manchester, ... ..	230
Birmingham, ... ..	225

#### EXCESSIVE FATALITY FROM NON-NOTIFIABLE DISEASES.

The deaths and death-rates from the principal zymotic diseases for each Ward are given in Appendix Table XXIII., and for comparative purposes the corresponding rates since 1903.

In the following Table the fatality from several diseases of the notifiable and non-notifiable groups of the zymotic class are shown for the Wards where the mean rate for the City was exceeded.

GLASGOW, 1912.—ZYMOTIC DEATH-RATE per MILLION in certain WARDS whose RATES EXCEED the MEAN RATE for the City.

MUNICIPAL WARDS.	Total Zymotics.	Smallpox.	Diphtheria.	Scarlet Fever.	Typhus Fever.	Enteric Fever.	Undefined Fever.	Cerebro-Spinal Fever.	Measles.	Whooping- cough.	Diarrhoea and Enteritis.	Total of Last Three Columns.
Whitevale, -	3,489	...	95	254	...	63	...	95	1,840	476	666	2,982
Mile-end, -	3,281	...	348	174	...	...	...	43	1,086	739	891	2,716
Calton, -	2,832	...	202	87	...	58	...	58	1,242	376	809	2,427
Broomielaw, -	2,776	...	...	...	...	...	...	...	2,449	327	...	2,776
Hutchesontown, -	2,716	...	205	77	26	77	...	...	1,332	589	410	2,331
Dalmarnock, -	2,401	...	293	98	...	39	...	98	702	234	937	1,873
Blackfriars, -	2,320	...	258	155	...	52	...	...	773	309	773	1,855
Springburn, -	2,307	...	269	224	...	90	...	45	1,052	224	403	1,679
Anderston, -	2,305	...	216	...	...	...	...	...	1,405	288	396	2,089
Sandyford, -	2,269	...	214	86	...	43	...	43	856	556	471	1,883
Townhead, -	2,123	...	453	142	...	28	...	28	651	368	453	1,472
Cowcaddens, -	1,965	...	298	30	...	149	...	30	476	327	655	1,458
<b>CITY, -</b>	<b>1,883</b>	<b>...</b>	<b>232</b>	<b>93</b>	<b>3</b>	<b>51</b>	<b>...</b>	<b>27</b>	<b>664</b>	<b>307</b>	<b>506</b>	<b>1,477</b>



From all diseases of the zymotic class the death-rate was greatest in Whitevale, Mile-end, Calton, and Broomielaw, where the rates were 3,489, 3,281, 2832 and 2,776 per million respectively, as compared with 1,883 for the City as a whole. In Hutchesontown, Dalmarnock, Blackfriars, Springburn, and Anderston, the mean rate for the City was also considerably exceeded.

It will be observed that the non-notifiable diseases—measles, whooping-cough, and diarrhoea—account for almost four-fifths of the death-rate from all zymotic diseases, the rate for measles alone being 664 per million persons living, as compared with 406 per million caused by all the infectious diseases which are notifiable. The rate for whooping-cough and diarrhoeal diseases together is twice the rate for the notifiable diseases.

Among the notifiable diseases diphtheria was most fatal, the death-rate therefrom having been 232 per million, while the rates from scarlet fever, enteric fever, and cerebro-spinal fever were 93, 51, and 27 per million respectively.

### SMALLPOX.

The first of the following extracts from the Report to the Committee on Health indicates the general routine in connection with Smallpox contacts notified by other Authorities, while the second extract indicates the difficulty of thorough inspection during the limited time vessels stand by at the Tail of the Bank:—

*Extract from Minute of 27th March, 1912.*

#### SMALLPOX CONTACTS.

During the fortnight intimations were received from the Port Medical Officer, Southampton, and from the Commandant, Gosport Barracks, Hants., that fourteen soldiers who had been passengers on board H.T. "Dongola," which arrived from Bombay on March 14th, and on which a case of smallpox was present on arrival, were being discharged to various addresses in Glasgow. The men have been kept under observation, and are now (14 days after exposure) still well. All had been revaccinated within recent years.

*Extract from Minute of 11th December, 1912.*

#### SMALLPOX.

During the week ending 7th December, a case of smallpox occurred under circumstances which create some anxiety as to the immediate result.

Patient was one of the crew of a vessel which arrived at Rothesay Dock on the morning of 4th December, from Seville. His home was in Ayr, and he travelled thither by train on the evening of the arrival of the vessel, returning to his work on board on the morning of 5th December. He remained at work during that, and part of the following day, but, feeling too ill to continue, returned to Ayr on Friday, 6th December, where he consulted a doctor, and was discovered to be suffering from smallpox. Same evening the Medical Officer of Ayr telephoned the circumstance, and enquiry disclosed the following history:—

The vessel on which patient worked had arrived at Seville, on the outward voyage, on 6th November, and remained there until 25th. From thence she came direct to the Clyde, and passed the Tail-of-the-Bank at 5.50 a.m. on 4th December. The crew was reported well. As before stated, patient did not feel ill or complain until 6th current, when, also, he had his attention drawn to two papules on his chin, which had been present from the forenoon of the day the vessel arrived, but to which he attached no importance until he felt ill. These papules were the beginning of the eruption of smallpox, and their appearance on 4th current suggests that his attack should be dated from 1st December, and as the vessel had been at sea continuously from the time she left Seville until arrival in the Clyde, the source of infection may be assigned to the period of her stay in Seville.

*Movements of Patient in Glasgow.*—In the three journeys which patient made between Glasgow and Ayr he travelled in a third class compartment with other passengers whom we are unable to trace. In addition to this, he visited at least three places of refreshment, and one music hall, and must, of course, have been in proximity to many people during the Thursday and Friday.

All the crew of the vessel were revaccinated, and she sailed for Cardiff on 11th current.

Revaccination was similarly offered at each of the places known to be visited by him, but, without exception, declined.

The known contacts are being kept under observation, and disinfection has been carried out of all places which he was known to have visited, but a considerable number of unknown persons must have been in contact with him at one or other stage of his movements, and it is with regard to those that most anxiety prevails.

It is hoped that by thus drawing attention to the circumstance, medical practitioners may be alive to the significance of limited eruptions of uncertain character appearing in persons consulting them.

### VACCINATION.

The following is a statement of the number and cost of vaccinations and re-vaccinations performed by the officers of the department, or on behalf of the Corporation, during the year 1912:—

						Primary.	Re-vaccinations.
At Office,	...	...	...	...	...	249	36
In Prisons,	...	...	...	...	...	—	1,134
„ Hospitals,	...	...	...	...	...	52	243
						<hr/> 301	<hr/> 1,413
						<hr/>	<hr/>
Cost.							
1. Vaccinations of Prisoners,	...	...	...	...	...	£56 14	0
2. Cost of Lymph,	...	...	...	...	...	28 15	0
						<hr/> £85 9	<hr/> 0
						<hr/>	<hr/>

### VACCINATION (SCOTLAND) ACT, 1907.

During the year declarations of conscientious objection to vaccination were made in respect of 4,371 children, compared with 3,791 objections made in 1911. The following shows the number of declarations made each year since the Act came into operation:—

1907,	...	...	...	...	...	407
1908,	...	...	...	...	...	2,183
1909,	...	...	...	...	...	2,653
1910,	...	...	...	...	...	3,231
1911,	...	...	...	...	...	3,791
1912,	...	...	...	...	...	4,371
						<hr/> 16,636
						<hr/>

The number of declarations made in the several Wards during 1912 is given in Appendix Table XXV. The maximum recorded in one Ward was in Springburn, where 438 declarations were made. It will be observed from the Table that in each year since 1908 the number of declarations made in this Ward has been much in excess of any of the other Wards. In Dalmarnock 395 declarations were made, in Mile-end 321, in Maryhill 304.

For several years a Table, compiled from information contained in the Annual Reports of the Registrar-General regarding the vaccination of children

born in the City, has been included in this Report. For comparison the figures for several years are given below:—

GLASGOW.—TABLE SHOWING RESULTS OF PRIMARY VACCINATION OF CHILDREN  
BORN IN GLASGOW DURING SEVERAL YEARS.

Year.	Successfully Vaccinated.	Vaccination Postponed.	Insusceptible of Vaccination.	Died before Vaccination.	Statutory Declaration of Conscientious Objection.	Removed from District or otherwise unaccounted for.
	<i>Per Cent.</i>	<i>Per Cent.</i>	<i>Per Cent.</i>	<i>Per Cent.</i>	<i>Per Cent.</i>	<i>Per Cent.</i>
1902	84·2	0·8	0·9	10·6	—	3·5
1903	84·6	0·7	0·6	10·8	—	3·3
1904	83·4	1·2	0·7	11·0	—	3·7
1905	84·5	1·3	0·6	10·0	—	3·6
1906	82·9	0·8	0·5	10·6	0·2	5·0
1907	75·0	1·5	0·7	10·7	4·9	7·2
1908	69·5	1·7	0·8	10·8	9·2	8·0
1909	67·2	1·7	0·8	10·6	12·6	7·1
1910	64·8	1·6	0·5	9·8	16·0	7·3

Figures for 1911 not yet available.

Until 1907 the percentage of successfully vaccinated children remained fairly constant. The average was about 84 per cent. This percentage has rapidly decreased, so that in 1910 it was less than 65, the difference being mainly due to the increase in the proportion of declarations of statutory objection to vaccination, which in that year reached 16 per cent. Those appearing under the heading “removed from district, or otherwise unaccounted for,” show an increase during the last four or five years, and indicate the existence of a degree of laxity regarding vaccination which extends beyond those who take the trouble to make a formal declaration of conscientious objection.

#### DIPHTHERIA.

1,735 cases of diphtheria and membranous croup were registered during the year, compared with 1,897 in 1911, and the number of deaths was 182, as against 173. These figures represent an attack-rate of 2,211 per million living, compared with 2,418 in 1911. The death-rate, on the other hand, was 232 per million, compared with 221 for 1911. The morbidity-rate (or the death-rate per 100 cases) was 10·5, as against 9·1 per cent. in 1911. Of the total cases, 90·3 per cent. were treated in hospital.

For several periods the death-rate from diphtheria in Glasgow has been—

1881-90,	...	...	280 per 1,000 living.
1891-1900,	..	...	231 „
1901-05,	...	...	134 „
1906-10,	...	...	205 „
1911, ...	...	...	221 „
1912, ...	...	...	232 „

Compared with several other towns during the ten years 1902-1911, the death-rate per 100,000 is as follows:—

							1902-1911.	1912.
Glasgow,	...	...	...	...	...	...	18	*
Edinburgh,	...	...	...	...	...	...	14	
Dundee,	...	...	...	...	...	...	20	
Aberdeen,	...	...	...	...	...	...	12	
Paisley,	...	...	...	...	...	...	20	
Greenock,	...	...	...	...	...	...	16	
London,	...	...	...	...	...	...	15	10
Liverpool,	...	...	...	...	...	...	20	14
Manchester,	...	...	...	...	...	...	18	13
Birmingham,	...	...	...	...	...	...	19	12

\* Figures not available.



In the following Table, the number of cases and deaths are stated for a series of years, together with the attack-rate and death-rate, the proportion of cases treated in hospital, and the case-fatality rate in each year.

DIPHTHERIA and MEMBRANOUS CROUP.

Year.	CASES.			DEATHS.			Case-mortality per cent.
	Number.	Rate per Million.	Per Cent. treated in Hospital.	Number.	Rate per Million.	Per Cent. occurring in Hospital.	
1891	465	822	16.1	131	232	23.7	28.2
1892	575	861	14.1	195	292	15.9	33.9
1893	828	1,228	19.0	246	365	25.6	29.7
1894	967	1,414	26.1	290	424	30.0	30.0
1895	654	944	28.4	137	198	19.0	21.0
1896	601	854	31.6	116	165	30.2	19.3
1897	462	647	32.9	127	178	30.7	27.5
1898	433	592	59.6	113	154	47.8	26.0
1899	465	622	52.3	109	146	31.2	23.5
1900	540	715	59.4	125	165	44.0	23.1
1901	563	739	57.2	115	151	44.4	20.4
1902	617	794	60.1	105	135	61.9	17.0
1903	724	926	71.1	103	132	68.9	14.3
1904	647	824	69.9	91	116	57.1	14.1
1905	726	924	80.0	107	136	75.7	14.7
1906	1,270	1,580	86.5	136	169	83.1	10.7
1907	1,218	1,510	85.6	127	157	87.4	10.4
1908	1,274	1,590	84.6	144	180	86.1	11.3
1909	1,846	2,306	88.5	222	277	86.5	12.0
1910	1,939	2,435	89.8	191	240	95.3	9.8
1911	1,897	2,418	89.6	173	221	90.7	9.1
1912	1,735	2,211	90.3	182	232	93.4	10.5

The increased prevalence of the disease which began in 1906 now shows a tendency to decrease, the case-rate this year being 207 per million less than that of 1911.

The mean attack-rate for the City as a whole was 2,211 per million, and this was exceeded in eleven Wards. Relatively the disease was most prevalent in Woodside, Park, Cowlairst, and Cowcaddens Wards, where the attack-rate was 3,639, 3,391, 3,235, and 3,068 per million respectively. Other Wards in which the average rate was exceeded were—Dalmarnock, Mile-end, Dennistoun, Springburn, Townhead, Langside, and Maryhill.

Excluding Blythswood Ward, where the population is small, and in which there were only 4 cases and no deaths, the disease was relatively most fatal in Woodside, where the death-rate reached 561 per million, as compared with 232 for the City. In Townhead the rate was 453 per million, and in Dennistoun, Mile-end, and Cowcaddens it exceeded 298 per million.

The following Table shows the number of cases treated at home and in hospital in each year since 1891, as well as the deaths occurring in each group, and the case-mortality per cent. The mortality among cases treated in hospital remains fairly uniform. On the other hand, there is considerable fluctuation in the mortality of cases treated at home, the rate for the present year being 6.6 per cent., as compared with 8.1 and 4.6 in the two years preceding. The lower fatality-rate in recent years among home cases as compared with that in hospital cases is accounted for by the fact that among the cases so treated there are included a considerable number in which the disease was recognised only after bacteriological enquiry consequent on the occurrence of previous



cases in families, and in which evidence of clinical symptoms was only elicited on careful enquiry being made after the result of the bacterial enquiry was known.

GLASGOW.—DIPHTHERIA and MEMBRANOUS CROUP.

YEAR.	TREATED AT HOME.			TREATED IN HOSPITAL.		
	Cases.	Deaths.	Case-mortality per cent.	Cases.	Deaths.	Case-mortality per cent.
1891	390	100	25·6	75	31	41·3
1892	494	183	37·0	81	12	14·8
1893	671	183	27·3	157	63	40·1
1894	715	203	28·4	252	87	34·5
1895	468	111	23·7	186	26	13·9
1896	411	81	19·7	190	35	18·4
1897	310	88	28·4	152	39	25·6
1898	175	59	33·7	258	54	20·9
1899	222	75	33·8	243	34	14·0
1900	219	70	32·0	321	55	17·1
1901	241	64	26·5	322	51	15·8
1902	246	40	16·3	371	65	17·5
1903	209	32	15·3	515	71	13·8
1904	195	38	19·5	452	53	11·7
1905	145	26	17·9	581	81	13·9
1906	172	23	13·4	1,098	113	10·3
1907	175	16	9·2	1,043	111	10·6
1908	196	20	10·2	1,078	124	11·5
1909	212	30	14·2	1,634	192	11·8
1910	197	9	4·6	1,742	182	10·4
1911	198	16	8·1	1,699	157	9·2
1912	169	12	6·6	1,566	170	10·9

SEASONAL PREVALENCE.

The following Table shows the seasonal prevalence of the disease over an extended period. It thus appears that the disease tends towards least prevalence in midsummer, but increases during the later months, and reaches a maximum about the late autumn :—

GLASGOW.—DIPHTHERIA and MEMBRANOUS CROUP.—NUMBER OF CASES REGISTERED and ANNUAL CASE-RATE per 100,000 LIVING for each MONTH for the PERIODS 1890-1900, 1901-1910, 1911, and 1912.

MONTH.	CASES.				ANNUAL CASE-RATE.			
	1890-1900.	1901-10.	1911.	1912.	1890-1900.	1901-10.	1911.	1912.
January, ...	652	920	174	194	103	137	261	291
February, ...	611	878	145	170	108	144	239	280
March, ...	586	836	130	168	93	125	195	252
April, ...	461	787	118	114	75	121	183	177
May, ...	444	658	114	131	70	98	171	197
June, ...	377	680	131	103	62	105	203	160
July, ...	300	548	116	114	47	82	174	171
August, ...	478	726	137	133	76	108	206	200
September, ...	608	1,012	177	167	100	156	275	259
October, ...	711	1,365	217	183	113	204	326	275
November, ...	698	1,273	224	142	114	196	348	220
December, ...	649	1,141	214	116	103	170	321	174
Year, ...	6,575	10,824	1,897	1,735	89	137	242	221

The analysis which has been made in previous years of the age distribution of cases before and after school holiday periods is again inserted.

GLASGOW, 1912.—DIPHTHERIA.—CASES NOTIFIED between May 1st and Oct. 31st, 1912, ARRANGED to SHOW the INFLUENCE of SCHOOL HOLIDAYS ON CASE-INCIDENCE.

PERIODS.	Cases Notified.						Increase or Decrease.						TOTAL.
	Age, 0—5.		Age, 5—14.		Age, 14 and up.		Age, 0—5.		Age, 5—14.		Age, 14 and up.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1st. { May 1 to June 30,	51	38	43	47	9	46	...	...	...	...	...	...	234
2nd. { July 1 to Aug. 31,	64	56	48	45	6	28	+13	+18	+5	-2	-3	-18	247
							+31		+3		-21		
3rd. { Sept. 1 to Oct. 31	75	77	58	89	20	31	+11	+21	+10	+44	+14	+3	350
							+32		+54		+17		
	190	171	149	181	35	105							831
	361		330		140								

The failure to fully appreciate the danger of apparently simple sore throat often leads to several cases occurring in one house, and the following example was reported to the Committee. The second Report relates the history of diphtheria infection caused by milk.

*Extract from Minute of 13th March, 1912.*

DIPHTHERIA.—AFFECTING MEMBERS OF ONE FAMILY.

During the fortnight, attention was directed to eight cases of diphtheria occurring in a family of ten persons residing in Dennistoun.

The family consisted of eight children, and seven of them together with the mother were attacked. The children were aged from two to sixteen years, and sickened in succession on February 22nd, 24th, and 27th, March 1st, 4th (two cases) and 5th, while the mother was ascertained to have the organism in her throat associated with general congestion of the fauces on 6th March. The child sickening on February 22nd was four years of age, and was not in attendance at school.

The earlier cases were regarded by the parents as mumps, and medical advice was not sought until March 2nd, after the child sickening on February 24th had died. On March 4th, the child who sickened on March 1st also died, and on the following day, regarding the illness as some form of malignant sore throat, they were brought to the notice of the department, and all who presented any evidence of the disease removed to hospital, where the child who had sickened on February 22nd, died on the second day following admission.

The nature of the disease was diphtheria, and the facts are related in order to call attention to the apparently trivial character of the symptoms which accompanied the first illnesses, and misled the parents as to the gravity of the disease.

*Extract from Minute of 20th November, 1912.*

#### DIPHTHERIA IN ASSOCIATION WITH MILK SUPPLIES.

During the interval since the last meeting of the Health Committee there have been two groupings of cases of diphtheria around particular milk supplies, and in each case it has been possible to demonstrate the presence of the organism in one or more of the persons connected with the milk trade. One occurred on the south and the other on the north side of the river, and in point of time that on the south side preceded the other.

In this outbreak 11 persons, residing in separate households in the neighbourhood of Crossmyloof, sickened between 22nd October and 2nd November, and a secondary case to the latter sickened on 12th November. Four were children under ten years of age, and all—save two—were under eighteen years of age.

The dairy purveying the milk consumed by these families obtained its supply from four separate sources, three of which also sent milk to other dairies, on whose supply no cases were occurring, while in the case of the remaining farm all the output was sold through the dairy in question.

The employees at all the farms were examined, with negative results. On the other hand, of those employed in the dairy (18 in number), four, including the dairyman, were found to have the organism of the disease in their throats, although none of them complained of sore throat. These latter were excluded from the dairy, and the business transferred to other premises until disinfection could be carried out.

Subsequent to this report three other cases sickened (on 14th and 16th November—same house), and one on November 21st, same close as 14 and 16 family. Disinfection of dairy was on November 3rd. This ended the outbreak.

In the days immediately following the extension of the boundaries, attention was attracted by two cases of diphtheria occurring on a particular milk supply in Jordanhill, and the arrival of a number of swabs for examination from medical men practising in the district where the patients resided.

When the episode drew to a close, 17 cases in all had occurred, sickening between 28th October and 10th November, three of the cases having been registered in Partick before annexation. Ten of the cases were children under ten, and the majority of the balance in early adult life.

The only feature common to all the cases was their obtaining milk from one dairy, the morning supply of which was obtained from a farm just on the new boundary, which on being visited by Dr. Wright and the employees examined was found to be absolutely free from infection. By way of confirming the freedom of this farm was the fact that some of its milk yield was sold in the immediate neighbourhood without any ill-results following.

On the same day the members of the dairy staff were examined, and of 11 persons engaged in the distribution of the milk 6 were found to have the organism of the disease in their throats, one being principally concerned with the handling of the whole supply. Their exclusion from the dairy followed, and the premises, including the milk tins, were thereafter disinfected.

It falls to be observed that on further enquiry, one member of the staff, a boy, admitted having had a sore throat a week previously, but not having been off work he made no complaint. His throat, however, was found positive.

After reporting three more were registered, viz., on November 9th, 14th and 20th (dates of sickening). Disinfection of dairy had been carried out on November 11th, and on these subsequent cases occurring all the carriers whose throats had proved negative on the earlier swabbing were re-swabbed, and one found positive on November 26th.



*Age and Sex Distribution.*—In former Reports the excessive fatality of diphtheria in infants has been pointed out, and the following Table repeats the illustration:—

GLASGOW, 1912.—DIPHTHERIA and MEMBRANOUS CROUP.—AGE and SEX  
DISTRIBUTION of CASES and DEATHS, with CASE-MORTALITY.

AGE.	Cases.		Deaths.		Case-mortality per cent.	
	Male.	Female.	Male.	Female.	Male.	Female.
Under 1	36	24	9	7	25·0	29·1
2	77	72	16	19	20·8	26·3
3	81	85	18	14	22·2	16·5
4	83	76	11	10	13·3	13·2
5	100	108	18	12	18·0	11·1
6	72	89	6	11	8·3	12·4
10	170	213	9	12	5·3	5·6
15	81	103	3	4	3·7	3·9
20	29	46	1	1	3·4	2·2
25	15	68	...	...	...	...
35	19	60	...	...	...	...
45	9	14	1	...	11·1	...
55	...	1	...	...	...	...
65	1	2	...	...	...	...
75	1	...	...	...	...	...
All Ages, {	774	961	92	90	11·9	9·4
	1,735		182		10·5	

*Relation of Croup to Diphtheria.*—The gradual shrinkage of croup as a cause of death, and its inclusion among true cases of diphtheria, is illustrated in the following Table, which shows the deaths and death-rates from diphtheria and croup separately and together for the period of seventeen years. By referring to former Reports the decrease over a longer period may be followed:—

GLASGOW.—DEATHS and DEATH-RATES *per Million* from DIPHTHERIA and CROUP  
from 1895 to 1911.\*

Year.	DEATHS.			DEATH-RATE PER MILLION.		
	Diphtheria.	Croup.	Diphtheria and Croup.	Diphtheria.	Croup.	Diphtheria and Croup.
1895	112	73	185	161	105	266
1896	83	54	137	118	76	194
1897	97	48	145	136	67	203
1898	103	29	132	142	40	182
1899	106	17	123	145	23	168
1900	130	19	149	175	25	200
1901	110	13	123	144	17	161
1902	106	21	127	137	27	164
1903	105	13	118	133	17	150
1904	95	9	104	119	11	130
1905	110	11	121	136	14	150
1906	147	9	156	176	11	187
1907	131	6	137	155	7	162
1908	156	3	159	180	3	182
1909	230	3	233	264	3	267
1910	202	3	205	228	3	231
1911	178	2	180	227	3	230

\* Registrar-General's Annual Report.  
Figures for 1912 not yet available.



## ENTERIC FEVER.

244 cases of enteric fever were registered during 1912, of which 219, or 89·8 per cent., were treated in hospital. The number of deaths from the disease was 40, representing a death-rate of ·051 per 1,000 living. The case-rate for the year was 311 per million living, compared with 489 in 1911, and the case-fatality rate was 16·4 compared with 15·4 per cent. The attack-rate for the year is the lowest hitherto recorded.

For several periods the death-rate from enteric fever in Glasgow has been :—

1881-90, ... ..	·230 per 1,000.
1891-1900, ... ..	·215 „
1901-1905, ... ..	·155 „
1906-1910, ... ..	·098 „
1911, ... ..	·075 „
1912, ... ..	·051 „

The following Table gives the attack-rate and death-rate per million and the case-mortality for each year since 1891, together with the proportion of cases removed to hospital :—

GLASGOW.—ENTERIC FEVER, 1891-1912.

Year.	CASES.			DEATHS.			Case-mortality per cent.
	Number.	Rate per Million.	Per cent. treated in Hospital.	Number.	Rate per Million.	Per cent. occurring in Hospital.	
1891	784	1,386	59·8	123	218	69·9	15·7
1892	590	884	58·3	101	151	67·3	17·1
1893	703	1,043	60·9	120	178	68·3	17·1
1894	810	1,184	72·2	151	221	76·2	18·6
1895	797	1,150	74·5	122	176	73·0	15·3
1896	691	982	71·1	145	206	72·4	21·0
1897	905	1,265	74·6	174	243	78·8	19·2
1898	1,212	1,657	86·6	228	312	86·0	18·8
1899	1,080	1,445	89·4	178	238	84·3	18·4
1900	1,013	1,340	85·1	158	209	85·4	15·6
1901	1,257	1,650	85·1	210	275	80·1	16·7
1902	698	899	90·7	110	142	88·2	15·8
1903	944	1,207	92·2	142	182	91·5	15·1
1904	628	800	91·6	84	107	89·3	13·4
1905	447	569	90·8	53	67	84·9	11·9
1906	388	483	92·5	82	102	87·8	21·1
1907	470	583	92·3	92	114	88·0	19·6
1908	594	741	87·7	72	90	86·1	12·1
1909	566	707	96·5	93	116	88·2	16·4
1910	340	427	95·6	56	70	100·0	16·5
1911	384	489	93·5	59	75	86·4	15·4
1912	244	311	89·8	40	51	87·5	16·4

For comparison with other towns the following particulars are given :—

DEATH-RATE PER 100,000 FROM ENTERIC FEVER IN CERTAIN LARGE TOWNS OF  
SCOTLAND AND ENGLAND.\*

							1902-1911.	1912.
Glasgow,	...	...	...	...	...	...	11	†
Edinburgh,	...	...	...	...	...	...	4	
Dundee,	...	...	...	...	...	...	7	
Aberdeen,	...	...	...	...	...	...	2	
Paisley,	...	...	...	...	...	...	9	
Greenock.	...	...	...	...	...	...	18	
London,	...	...	...	...	...	...	6	3
Liverpool,	...	...	...	...	...	...	13	3
Manchester,	...	...	...	...	...	...	11	6
Birmingham,	...	...	...	...	...	...	9	4

† Figures not available.

The Ward distribution of the cases and deaths is shown in Appendix Table XXVII. Relatively the disease was most prevalent in Pollokshields, where there was an outbreak associated with a milk supply. Next in order of prevalence was Gorbals Ward, where the attack-rate was equal to 597 per million, as compared with 311 for the City. In Cowcaddens, Calton, and Kinning Park Wards the rate was 573, 487, and 472 per million; in Woodside it was 412 per million; and in three other Wards the average rate for the City was exceeded.

The average death-rate for the year, 51 per million, was exceeded in eleven Wards, being highest in Cowcaddens, Woodside, and Pollokshields, where the rates were 149, 122, and 113 per million respectively.

The attention of the Local Authority was on several occasions throughout the year directed to the occurrence of the disease in special circumstances, and the following may be quoted in illustration :—

*Extract from Minute of 27th March, 1912.*

RESULTS OF UNRECOGNISED CASE IN A CARAVAN.

The parents and three children of a family residing in a caravan in the neighbourhood of Garscube Road were recently admitted to hospital suffering from enteric fever.

The mother is to be regarded as the source of infection, and as she suffered from an illness about New Year, the symptoms of which were indefinite at the time, but which would now appear to have been enteric fever because of the subsequent cases, and also because of the nature of her blood reaction.

Attention was first directed to the cases on 29th February by a message from Ruchill Hospital, to which one of the children, aged three, had been admitted on 20th February suffering from measles. It was there ascertained that a certain train of symptoms had begun on 17th February, which ultimately became definitely those of enteric fever, and subsequent to this two other children of the family sickened on the 20th, and the father on the 27th.

ENTERIC FEVER ASSOCIATED WITH A MILK SUPPLY.

Certain cases of enteric fever occurred in association with a milk supply in Pollokshields, beginning in April last.

These were reported verbally to the Committee at the time of their occurrence, but the formal report has been withheld until the completion of certain laboratory investigations which were thought desirable.

\* Registrar-General's Annual Report.

Substantially, however, the facts are as follows:—

In 1909—One consumer of milk from the dairy sickened in October.

In 1910—Single cases occurred in each of the months June, August, October, and December, and three in September—seven in all.

In 1911—Two cases occurred in October, three in November and one in December—six in all.

In 1912—One case occurred in January, one in March, fourteen in April, and three in May—nineteen in all.

Contrasted with these it is to be noted that in the Ward in which the Dairy is situated, the only other cases of enteric fever during these several years were as follows:—

In 1909—Two cases in separate dairies.

In 1910—Two cases in separate dairies.

In 1911—No other cases occurred.

In 1912—One case only in another dairy during the first six months of the year.

The concentration on the milk stream from the Pollokshields Dairy is thus obvious.

#### DISTRIBUTION OF CASES.

On each of these occasions the quantity of milk sold and the main sources from which it was obtained were approximately similar.

The average daily quantity sold slightly exceeded 80 gallons, and the number of separate families to whom milk was delivered by carriers was about 250. In addition, however, an unknown number were supplied over the counter.

As a general rule, also, the milk delivered in the morning by the carriers was unsterilised, whereas some at least of that sold over the counter had been sterilised.

In all, 33 cases occurred among the members of 30 families, there being three in one household and two in another—all the multiple cases occurring in 1912.

All these families, save the case sickening in 1909, obtained their supply mainly and in most cases exclusively by carrier.

#### SOURCES OF SUPPLY.

The milk was obtained from the following sources:—

1. Farm A, Neilston—40 gallons, which was the total output of farm.
2. Farm B, Carmunnock—from 30 to 40 gallons, but in 1910 an almost equivalent portion of the total yield of this farm was being sold through another dairy on which no cases were occurring; while in 1912 the dairy in Pollokshields obtained from this farm less than was being sold through three other dairies which were likewise free from disease.
3. An additional supply from Farm C—occasional in the earlier period, but latterly daily. This was always less than half the total yield of the farm in question, the remainder of the milk being sold through five other dairies. none of them having associated cases of disease.

Further, on 1st May, the farmer at Farm A removed with his whole stock to another farm, and from this date transferred his milk to another dairy, also in Pollokshields, on which no cases occurred; while his successor at Farm A took up the trade with the Pollokshields dairy and continued until the dairy was closed in May.



## QUESTION OF SOURCE OF INFECTION.

The circumstances of the outbreak, but particularly the recurrence of cases after considerable intervals, are directly suggestive of a "carrier" case. Seven of the patients were consumers of Farm B milk sold through the Pollokshields dairy, but there were no cases on this milk when sold elsewhere. The others were consumers of Farm A milk, but this supply when transferred to another farm and to another dairy, on May 1st, ceased to be associated with cases, and although the new tenant of Farm A after this date continued to supply the Pollokshields dairy for a fortnight, the latest sickening occurred on May 10th. This circumstance, together with the negative results obtained through repeated and prolonged inquiry at the farm in association with the County Authorities and amongst the whole dairy staff, gave rise to the conviction that the focus of infection lay in the dairy itself. None of the milk-carriers' families yielded any suggestion of past illnesses which would fit in with a history of enteric fever; blood and discharges examined bacteriologically proved alike negative. The water supply of Farm A was examined bacteriologically, but without result.

Epidemiologically, the evidence against the dairy appeared conclusive, but it was impossible to bring the source home to any of the staff.

The dairy is well situated and was well conducted save for a habit, which is not uncommon elsewhere, of placing the cans of the milk-carriers to drip on a drain-grating in the floor of the back premises.

When the practice was discovered it became a question which could only be settled by experiment, whether, assuming infection to be in the drain, it might not occasionally contaminate the can as it rested on the grating. I have already stated that the first case to occur was not a carrier but a counter customer. His house was in the same tenement as the dairy, and he was treated at home. Complete disinfection of excreta in these circumstances is difficult, and the problem which presented itself was whether infection being discharged down this drain could not only maintain its viability, but could extend backward by bacterial growth along the surface of the drain which conveyed effluent from the washing of the dairy vessels to the soil-pipe which was thus infected.

To determine this point, Dr. Buchanan has fitted up a model drainage system, and at the moment his inquiry admits of the statement that, contrary to the accepted belief, growth backward against the current of the drain has occurred to a distance of five feet. The inquiry, however, is not yet completed.

When the inquiry had reached the point which suggested this experiment, the trade of the dairy had considerably diminished, and during an interview with the dairykeeper I gave her the following letter in compliance with her desire to be protected against claims by the farmers who were supplying her with milk:—

"In consequence of the cases of enteric fever, which, as you know, are  
 "occurring on the supply of milk distributed from your dairy at the above  
 "address, I have to ask that you will be good enough to arrange to cease  
 "the dairy business thereat at once until further notice."

The dairy was closed that evening (15th May).

Subsequent to the closure the back premises were disinfected on two occasions, as were also the drain leading therefrom, and the soil-pipes and drain of the tenement.

The dairy was reopened on 7th June, and the milk now sold is from Farm B. No further cases occurred.

## DEATH-RATE IN HOSPITAL AND HOME CASES COMPARED.

The following Table is again introduced to illustrate the contrast in fatality between cases treated at home and in hospital. Since 1901, with the exception of the year 1910, the mortality among cases treated in hospital has always been below the rate among cases treated at home. The number of



## REFERENCES

1891

71361

505

500

1991

110

1922

U.

- 1311

1944

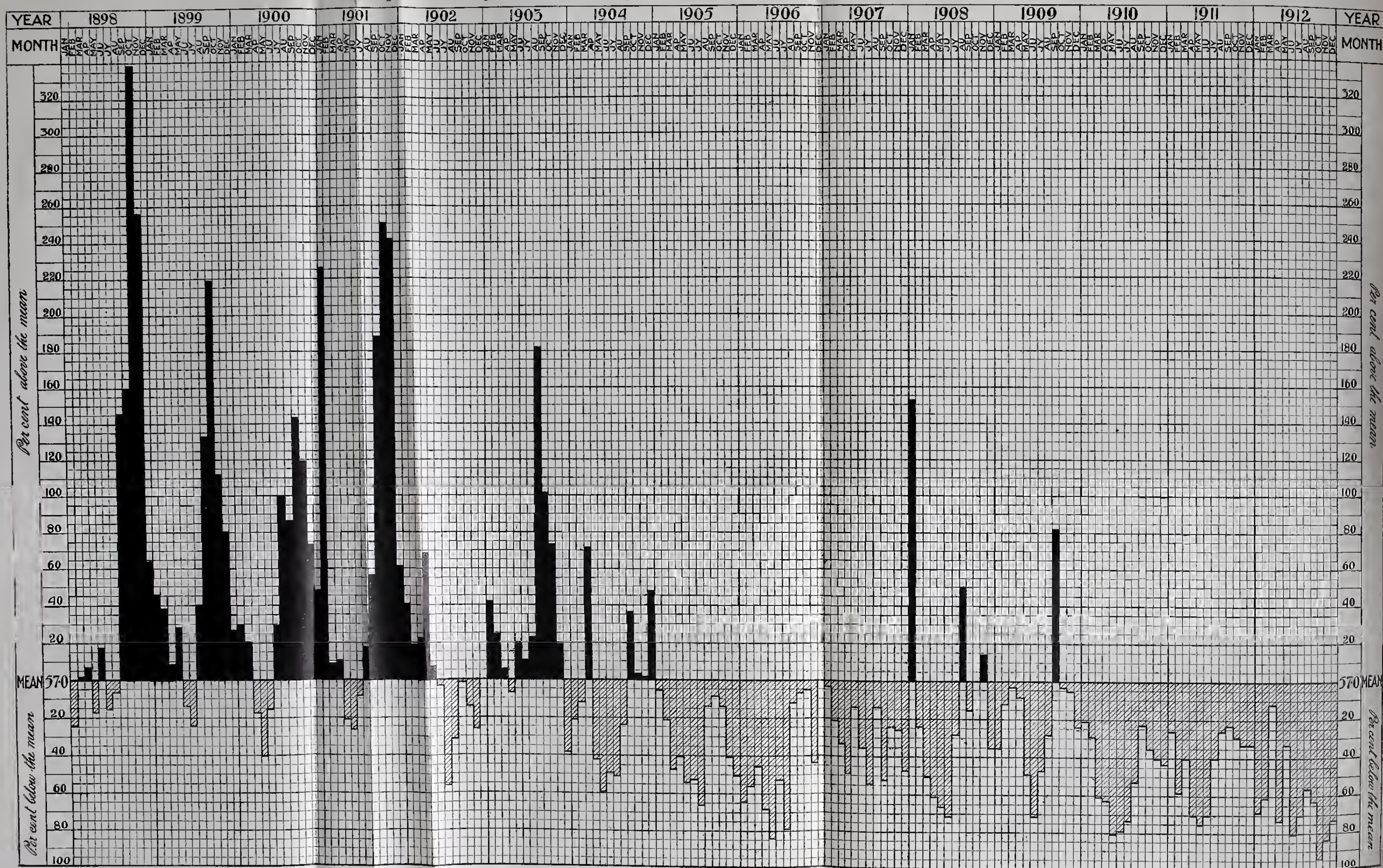
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2



# ENTERIC FEVER.

Chart showing monthly variations of Notifications in each year from 1898 to 1912.





cases so treated, however, is relatively small, and there is naturally considerable fluctuation in the mortality-rate.

GLASGOW.—ENTERIC FEVER.

YEAR.	TREATED AT HOME.			TREATED IN HOSPITAL.		
	Cases.	Deaths.	Case-mortality per cent.	Cases.	Deaths.	Case-mortality per cent.
1891	315	37	11·8	469	86	18·3
1892	246	33	13·4	344	68	19·8
1893	275	38	13·8	428	82	19·2
1894	225	36	16·0	585	115	19·7
1895	203	33	16·3	594	89	15·0
1896	200	40	20·0	491	105	21·4
1897	230	37	16·1	675	137	20·3
1898	162	32	19·8	1,050	196	18·7
1899	114	28	24·6	966	150	15·5
1900	151	23	15·2	862	135	15·7
1901	187	42	22·5	1,070	168	15·7
1902	65	13	20·0	633	97	15·3
1903	73	12	16·2	871	130	14·9
1904	53	14	26·4	575	70	12·2
1905	41	8	19·5	406	45	11·1
1906	29	10	34·5	359	72	20·1
1907	36	11	30·6	434	81	18·7
1908	73	10	13·7	521	62	11·9
1909	20	11	55·0	546	82	15·0
1910	15	...	...	325	56	17·2
1911	25	8	32·0	359	51	14·2
1912	25	5	20·0	219	35	16·0

Careful enquiry was made throughout the year as to the number of privies still existing. These were found to number 89, and served altogether 277 separate families, the distribution being as follows:—

	No. of Privies.	No. of Families.
Ward 1.—Dalmarnock, ...	1	2
„ 2.—Calton, ...	2	20
„ 3.—Mile-end, ...	4	32
„ 5.—Dennistoun, ...	4	17
„ 6.—Springburn, ...	17	31
„ 18.—Hutchesontown, ...	1	6
„ 20.—Kingston, ...	2	17
„ 21.—Govanhill, ...	24	77
„ 22.—Langside, ...	4	16
„ 23.—Pollokshields, ...	16	20
„ 24.—Kelvin-side, ...	5	23
„ 25.—Maryhill, ...	9	16
	89	277

Enquiry, however, has not suggested that enteric fever was in any way associated during the year with these privies.

Facing this page will be found a chart showing the monthly variations in the notifications of enteric fever in each year since 1898. The year 1911 represents the minimum which has been attained in enteric fever, and while other influences have no doubt contributed, the low incidence which has prevailed since 1905 is no doubt in great part related to the fact that a water carriage system of sewage is now practically universal in the City.

## CEREBRO-SPINAL FEVER.

The number of cases of this disease registered during the year 1912 was 19, giving an attack-rate of 24 per million, as against 64 recorded in 1911, and a case-rate of 64. The deaths numbered 21, as compared with 46 in the preceding year, with a resulting death-rate of 27 per million against 59.

Table XXVIII. in the Appendix shows the distribution of the cases and the incidence of the disease throughout the various Wards.

## TYPHUS FEVER.

34 cases of typhus fever were recorded in 1912, and two deaths occurred. All the cases were removed to hospital. The case-rate was thus equal to 43 per million, and the death-rate to three per million living.

The death-rate for several periods has been as follows:—

1881-90,	...	...	...	...	...	040 per 1,000 living.
1891-1900,	...	...	...	...	...	016 „
1901-1905,	...	...	...	...	...	011 „
1906-1910,	...	...	...	...	...	002 „
1911,	...	...	...	...	...	004 „
1912,	...	...	...	...	...	003 „

Compared with other large towns, the death-rate in the ten years, 1902-1911, per 100,000 living, was as follows:—\*

	1902-1911.	1912.
Glasgow,	...	05 †
Edinburgh,	...	—
Dundee, ...	...	05
Aberdeen,	...	10
Paisley, ...	...	01
Greenock,	...	08

† Figures not available.

Appendix Table XXIX. shows that thirteen cases were registered during the year in Hutchesontown; while six occurred in Blackfriars, four in Gorbals, and three in Kingston. Two deaths occurred. The circumstances under which all the cases occurred were reported to the Committee on Health at the time, and the following extracts are inserted:—

*Extract from Minute of 14th February, 1912.*

On 18th January, a young woman, who was resident in a house in the Langside district, and who was under observation as a contact with typhus fever, sickened of the disease, and was subsequently removed to hospital.

Her exposure to infection had occurred on New Year's Eve, when she stayed overnight with friends in Motherwell, in a house in which at the time a patient in the ninth day of a similar disease was under treatment. The incubation period may, therefore, be definitely fixed at eighteen days. Twenty-two days have elapsed since her removal to hospital, and, as no subsequent sicknesses have occurred, the strain of infection may be regarded as interrupted.

*Extract from Minute of 13th March, 1912.*

On 2nd March, a female patient, aged 22, was removed to Belvidere Hospital certified as suffering from "continued fever," but recognised on admission to be ill of typhus fever.

The house in which she resided is a two-apartment house, clean and well-kept, and not overcrowded. There were six other inmates of the house, five of whom were adults, and one was a child. Among the adults was an aunt, who slept in



the same bed as the patient, and who had been ill some time in January of symptoms which were regarded as due to influenza, and was under treatment in one of the general hospitals from 6th to 10th February for what would appear to have been a sequel of that illness. The history was consonant with that of typhus fever, and the association of the present patient with her would appear to have been determined by the fact of them occupying the same bed. The illness of the present patient began on 17th February.

*Extract from Minute of 27th March, 1912.*

A boy, aged 14, one of the members of the family removed to the Reception House on 4th March in connection with the case of typhus fever reported last fortnight, sickened of the disease on 15th instant, and was removed to hospital.

On this date also a male adult was removed to Ruchill Hospital from one of the Poor Law Hospitals, to which he had been admitted on 7th instant, certified as suffering from symptoms of acute rheumatism, but which proved to be the onset of an attack of typhus fever. He had been an inmate of a model lodging-house in the central district for twelve months prior to his sickening.

In view of the gravity of the occurrence of typhus fever in association with the common lodging-houses, I have directed the attention of the superintendents of these places to the circumstance.

*Extract from Minute of 26th June, 1912.*

I desire to place on record the salient facts relating to certain recent cases of typhus fever in the City.

On May 25th, typhus fever appeared at 35 Commercial Road, in a family of whom three had already had the disease six years ago. In association with the present three cases removed from this one family ten others subsequently sickened, all in the immediate neighbourhood. In a second family of nine persons, not definitely associated with the former, living at 153 South Wellington Street, seven cases were discovered, the first being an unrecognised case, sickening on May 2nd. In a third family, at 436 South Wellington Street—again unconnected with former cases—two patients sickened on June 15th, and another unassociated case sickened in Barnhill Poorhouse on June 11th. This patient had been resident there since August, 1911.

There have been in all 23 definite cases of typhus fever occurring in four apparently distinct foci, involving 13 families, four of which contributed 3, 2, 7, and 2 cases respectively.

Ninety-six contacts were removed from time to time to the Reception House, and three of them subsequently sickened while under observation.

The first intimation received on June 5th of the presence of typhus fever in the City came from Belvidere Hospital, where two cases had been admitted under a diagnosis of enteric fever. It is now known that by this time there must have been in the district nine cases sick, involving seven families. Since then sixteen cases have sickened, involving six additional families. The last case removed from the area took ill on June 17th.

*Extract from Minute of 24th July, 1912.*

Since I last reported regarding the outbreak of this disease, other seven cases have occurred. Two of these were contacts—members of a family in which cases had previously occurred, and who were under observation in the Reception House.

On July 17th, two members of one family admitted to Belvidere as enteric fever were reported to be suffering from typhus fever, and the mother of the same family, who was a patient in one of the general hospitals, was also found to be suffering from the same disease.

On the same day it was reported from Belvidere that a boy, 9 years of age, admitted as scarlet fever, was suffering from typhus.

Then on July 20th, the hospital further reported that a girl, aged 13, admitted as continued fever, was diagnosed as typhus.

No association can be traced between the three families in which the disease has now appeared, or between them and the previous case, except that all are domiciled on the south-side in the neighbourhood of the earlier cases.

## SCARLET FEVER.

The number of cases of scarlet fever notified during 1912 was 2,893, representing an attack-rate of 3·7 per thousand of the population living. 2,658 of the cases, or 91·9 per cent., were treated in hospital. The deaths numbered 73, representing a death-rate of 93 per million living, and a case-fatality-rate of 2·5 per cent.

The decrease in the death-rate from the disease since 1881 has been as follows:—

Average of 10 years, 1881-90,	...	...	...	490 per 1,000 living.
„ 10 „ 1891-1900,	...	...	...	295 „
„ 5 „ 1901-1905,	...	...	...	111 „
„ 5 „ 1906-1910,	...	...	...	121 „
1911,	...	...	...	116 „
1912,	...	...	...	093 „

Compared with other large towns, the death-rate for several periods has been as follows:—\*

						Death-rate per 100,000.	1912.
						1902-1911.	
Glasgow,	...	...	...	...	...	11	†
Edinburgh,	...	...	...	...	...	10	
Dundee, ...	...	...	...	...	...	10	
Aberdeen,	...	...	...	...	...	7	
Paisley, ...	...	...	...	...	...	15	
Greenock,	...	...	...	...	...	20	
London, ...	...	...	...	...	...	9	4
Liverpool,	...	...	...	...	...	27	11
Manchester,	...	...	...	...	...	16	7
Birmingham,	...	...	...	...	...	19	18

† Figures not available.

The number of cases registered, with the proportion treated in hospital, the proportion of deaths occurring there, and the case-mortality for each year since 1891, are stated in the following Table:—

## SCARLET FEVER.

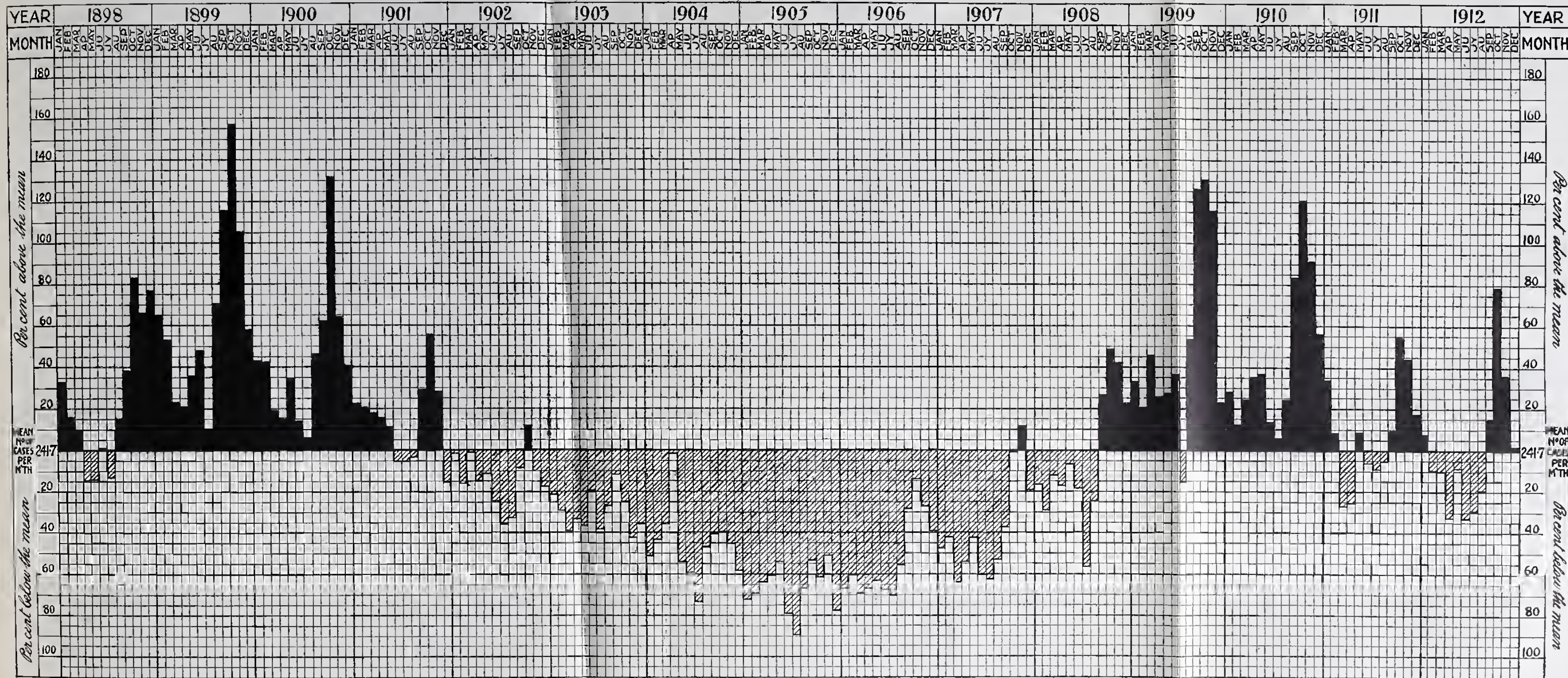
Year.	CASES.			DEATHS.			
	Number.	Rate per Million.	Per cent. treated in Hospital.	Number.	Rate per Million.	Per cent. occurring in Hospital.	Case-mortality. per cent.
1891	3,045	5,383	62·8	201	355	69·2	6·6
1892	4,844	7,257	62·7	301	451	63·5	6·2
1893	4,027	5,973	70·9	267	396	68·9	6·6
1894	3,930	5,701	73·7	210	307	70·0	5·3
1895	3,502	5,051	75·5	184	265	76·6	5·3
1896	2,728	3,879	78·9	143	203	82·5	5·2
1897	2,955	4,130	75·5	130	182	77·7	4·4
1898	3,620	4,947	82·3	190	260	76·3	5·2
1899	4,728	6,327	83·8	205	274	71·7	4·3
1900	4,162	5,508	85·7	210	278	77·6	5·0
1901	3,317	4,355	84·3	131	172	80·1	3·9
1902	2,509	3,229	85·3	113	145	77·9	4·5
1903	2,031	2,597	85·3	82	105	79·2	4·0
1904	1,573	2,003	83·2	69	88	85·5	4·4
1905	970	1,235	87·1	35	45	97·1	3·6
1906	1,382	1,721	87·8	50	62	84·0	3·6
1907	1,759	2,180	89·0	45	56	97·8	2·6
1908	2,797	3,491	91·4	89	111	95·5	3·2
1909	4,410	5,510	91·8	158	197	89·2	3·5
1910	4,203	5,277	91·4	141	177	89·4	3·4
1911	3,154	4,020	91·7	91	116	91·2	2·9
1912	2,893	3,687	91·9	73	93	98·6	2·5

\* Registrar-General's Annual Report.



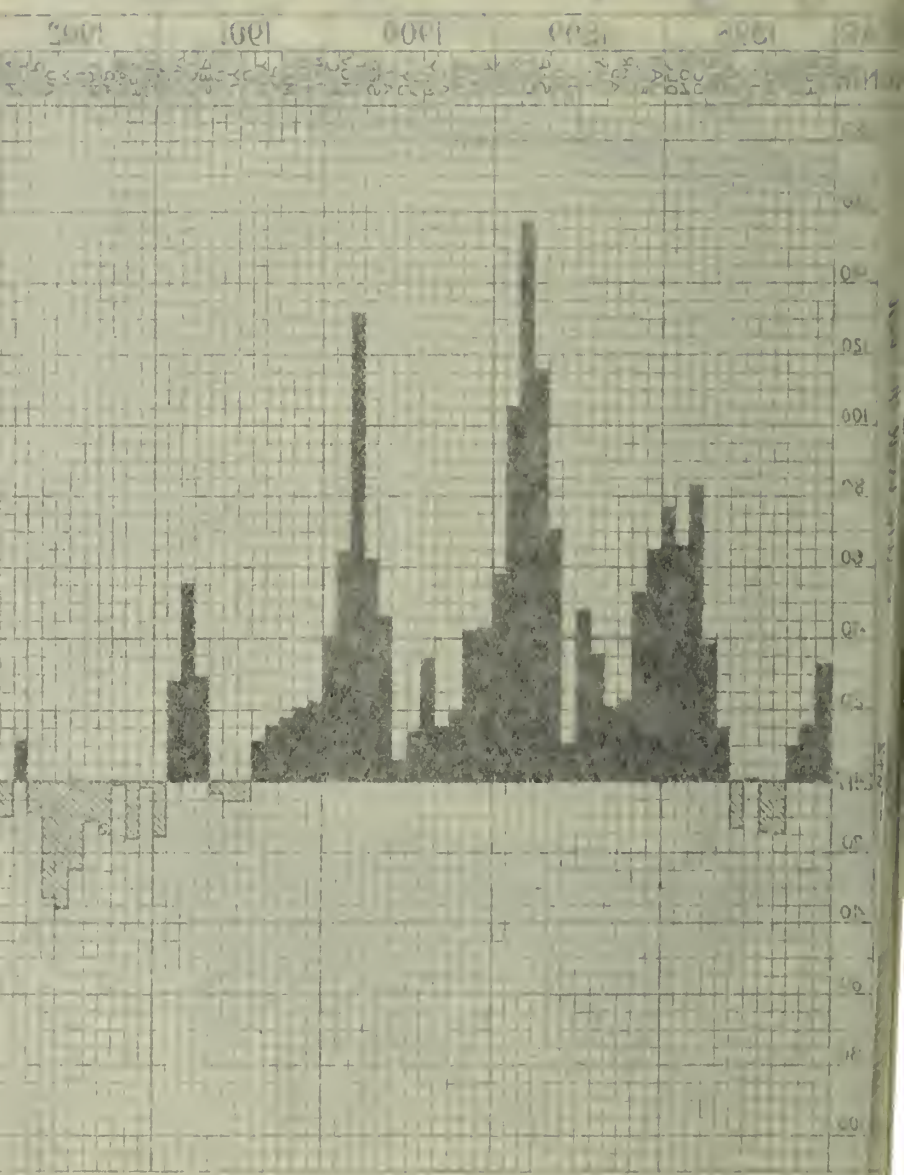
# SCARLET FEVER.

Chart showing monthly variations of Notifications in each year from 1898 to 1912





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There was a considerable diminution in the number of cases recorded during the year—2,893, as compared with 3,154 in 1911—and the attack-rate fell from 4 per 1,000 to about 3·7. The case-mortality was also less than in the preceding year, being 2·5 as against 2·9 per cent.

The chart on the opposite page shows the incidence of the disease during each month in the past fourteen years. Since 1909 the downward tendency of the curve is approximately the same as occurred after the year 1899, so that the disease would appear again to have entered upon a period of diminishing prevalence.

The Ward incidence of the disease is shown in Appendix Table XXX. Cases occurred in all the Wards, but the disease was relatively most prevalent in Govanhill, Mile-end, Langside, Whitevale, and Maryhill, where the attack-rates were 5,672, 5,544, 5,053, 4,572, and 4,514 per million, as compared with the average rate for the City as a whole of 3,687.

The highest death-rates occurred in Whitevale, Springburn, Mile-end, and Blackfriars Wards.

Townhead and Govanhill Wards come next, while in Dalmarnock and Langside the rates also exceeded that of the City.

#### MILK INFECTION ASSOCIATED WITH "RETURN" CASES OF SCARLET FEVER.

The association of milk infection with return cases of scarlet fever has not, I think, been hitherto recorded, and the following outbreak which was reported to the Committee on Health affords evidence of the care which should be exercised with patients discharged from hospital when discharge from the eyes or nose is present.

*Extract from Minute of 11th December, 1912.*

Attention was called in last fortnight's report to the occurrence of two outbreaks of diphtheria associated with milk supplies, and in the present fortnight cases of scarlet fever have occurred in association with another milk supply in a manner which affords, I think, the first illustration on record of "return cases" occurring in this way.

Twelve cases in all occurred, affecting eleven households. An interval of 16 and 13 days respectively separated the two earlier cases from the others, the dates of sickening being November 2nd, 5th, 18th, 23rd, and 26th (1 case each), November 20th (3 cases), and November 21st (4 cases).

All the employees at the dairy, of which these families were customers, were medically examined without furnishing a history or showing any symptoms suggesting scarlet fever, but when the farm from which the milk supply of the dairy was obtained was visited, and the members of the household examined, it was found that two of the farmer's children had been dismissed from one of the County Fever Hospitals, one on October 26th and another on November 16th, and that the former was suffering from an acrid nasal discharge so frequently associated with return cases of the disease, while the latter bore evidence of having recently had a similar discharge.

It has long been recognised that children dismissed from hospital apparently recovered from these complications are liable to recurrence thereof, and thereby occasionally to transmit infection to other members of the family on their return home, but there is no case recorded hitherto, I believe, where milk would appear to have become the carrier of infection thus acquired, and the explanation in the present instance would appear to be that the mother attended to the child with the discharge, and was also engaged in milking.

The children were at once removed from the farm, and the premises disinfected. Since then no further cases have occurred.

The following Table shows the number of cases treated at home and in hospital in each year since 1891, and the number of deaths occurring in each group. The case-mortality among hospital cases is considerably less than in the four preceding years. Cases treated at home are relatively few in number, and the rates in these circumstances are liable to fluctuation, and are apt to mislead:—

## GLASGOW.—SCARLET FEVER.

YEAR.	TREATED AT HOME.			TREATED IN HOSPITAL.		
	Cases.	Deaths.	Case-mortality per cent.	Cases.	Deaths.	Case-mortality per cent.
1891	1,133	62	5·5	1,912	139	7·3
1892	1,807	110	6·1	3,037	191	6·3
1893	1,172	83	7·1	2,855	184	6·4
1894	1,034	63	6·1	2,896	147	5·1
1895	858	43	5·0	2,644	141	5·3
1896	576	25	4·3	2,152	118	5·5
1897	724	29	4·0	2,231	101	4·5
1898	640	45	7·0	2,980	145	4·9
1899	764	58	7·6	3,964	147	3·7
1900	594	47	7·9	3,568	163	4·6
1901	522	26	5·0	2,795	105	3·8
1902	369	25	6·8	2,140	88	4·1
1903	297	17	5·7	1,734	65	3·8
1904	265	13	4·9	1,308	56	4·3
1905	125	1	0·8	845	34	4·0
1906	168	8	4·8	1,214	42	3·5
1907	193	1	0·5	1,566	44	2·8
1908	240	4	1·7	2,557	85	3·3
1909	363	17	4·7	4,047	141	3·5
1910	360	15	4·2	3,843	126	3·3
1911	261	8	3·1	2,893	83	2·9
1912	235	1	0·4	2,658	72	2·7

## “RETURN” CASES.

During the year, 74 “return” cases occurred in 60 families, subsequent to the return of earlier cases from hospital. This represents a rate of 2·9 per cent. on the dismissals. The average residence in hospital of the earlier cases was 60 days, the maximum was 135 days, and the minimum 35.

The following Table shows the distribution of the cases throughout the three weeks subsequent to dismissal of the first case:—

## GLASGOW, 1912.—SCARLET FEVER.—RETURN CASES.—DAYS ELAPSING BETWEEN RETURN OF EARLIER AND SICKENING OF SUBSEQUENT CASES.

FIRST WEEK.		SECOND WEEK.		THIRD WEEK.	
Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.
1	...	8	11	15	4
2	...	9	5	16	3
3	1	10	3	17	1
4	3	11	5	18	2
5	1	12	8	19	1
6	6	13	...	20	2
7	5	14	4	21	9
				and over	
	16		36		22

### “SECONDARY” CASES.

118 “secondary” cases occurred in households after disinfection had been carried out after a previous case. Of the total, 76 occurred within one week, 24 others within 14 days, and 18 exceeding 14 days.

GLASGOW, 1912.—SCARLET FEVER.—SECONDARY CASES occurring in HOUSEHOLD after DISINFECTION.

FIRST WEEK.		SECOND WEEK.		THIRD WEEK.	
Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.	Days Elapsing.	No. of Cases.
1	13	8	2	15	3
2	12	9	7	16	1
3	16	10	5	17	5
4	7	11	...	18	1
5	14	12	3	19	2
6	3	13	2	20	1
7	11	14	5	21	5
				and over	
	76		24		18

### EFFECT OF SCHOOL HOLIDAYS ON THE OCCURRENCE OF CASES.

The apparent effect of school holidays in reducing the number of cases was referred to when dealing with diphtheria, and a similar Table is here introduced for scarlet fever. While there was a reduction in the number of cases during the two months the schools were closed, there was a very marked increase during the following two months. This was most marked at school ages 5-14. As pointed out when dealing with the diphtheria cases, however, this may not be wholly due to school influence, but may be associated with the autumnal increase in the prevalence of this disease.

GLASGOW, 1912.—SCARLET FEVER.—CASES NOTIFIED between May 1st and Oct. 31st, 1912, ARRANGED to SHOW the INFLUENCE of SCHOOL HOLIDAYS on CASE-INCIDENCE.

PERIODS.	Cases Notified.						Increase or Decrease.						TOTAL.
	Age, 0—5.		Age, 5—14.		Age, 14 and up.		Age, 0—5.		Age, 5—14.		Age, 14 and up.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1st. { May 1 to June 30,	50	45	109	116	31	33	...	...	...	...	...	...	384
2nd. { July 1 to Aug. 31,	58	60	92	105	29	22	+ 8	+ 15	- 17	- 11	- 2	- 11	366
							+ 23		- 28		- 13		
3rd. { Sept. 1 to Oct. 31,	86	81	188	262	29	63	+ 28	+ 21	+ 96	+ 157	+ —	+ 41	709
							+ 49		+ 253		+ 41		
	194	186	389	483	89	118							1,459
	380		872		207								



## MEASLES.

15,020 cases were registered in 1912, as compared with 9,552 in 1911, and 524 deaths occurred, representing a death-rate of '664 per 1,000 of the estimated population living. Of the total deaths, 24·8 per cent. occurred in hospital, and 96·6 per cent. of the fatal attacks were in children under 5 years of age.

For several periods the death-rate has been as follows:—

1881-90, ... ..	·680 per 1,000 living.
1891-1900, ... ..	·784 „
1901-1905, ... ..	·512 „
1906-1910, ... ..	·634 „
1911, ... ..	·375 „
1912, ... ..	·664 „

The following Table shows the death-rate per 100,000 for several large towns for the ten years 1902-1911:—\*

						1902-1911.	1912.
Glasgow, ... ..	...	...	...	...	...	53	†
Edinburgh, ... ..	...	...	...	...	...	27	
Dundee, ... ..	...	...	...	...	...	46	
Aberdeen, ... ..	...	...	...	...	...	35	
Paisley, ... ..	...	...	...	...	...	41	
Greenock, ... ..	...	...	...	...	...	48	
London, ... ..	...	...	...	...	...	44	40
Liverpool, ... ..	...	...	...	...	...	51	115
Manchester, ... ..	...	...	...	...	...	54	68
Birmingham, ... ..	...	...	...	...	...	42	67

† Figures not available.

The following Table shows the total deaths, the number occurring in hospital, and their proportion to the total deaths from the disease for several years:—

## MEASLES.

Year.	DEATHS.		Death-rate per Million.	Percentage of Total Deaths occurring in Hospital.
	Total Number.	Number occurring in Hospital.		
1895	329	46	475	14·0
1896	819	126	1,164	15·4
1897	586	73	819	12·5
1898	539	89	737	16·5
1899	544	95	828	17·5
1900	461	81	610	17·6
1901	499	89	655	17·8
1902	266	33	342	12·4
1903	346	73	442	21·1
1904	328	54	418	16·5
1905	551	159	701	28·9
1906	395	108	492	27·3
1907	400	158	496	39·5
1908	824	224	1,028	27·2
1909	394	68	492	17·3
1910	527	155	662	29·4
1911	294	105	375	35·7
1912	524	130	664	24·8

\* Registrar-General's Annual Report.



### WHOOPIING-COUGH.

The deaths from whooping-cough during 1912 numbered 241, which is equal to a death-rate of 307 per million living. The death-rate from the disease for several periods has been as follows:—

1881-1890,	...	...	...	1·150	per 1,000 living.
1891-1900,	...	...	...	·879	"
1901-1905,	...	...	...	·802	"
1906-1910,	...	...	...	·699	"
1911,	...	...	...	·625	"
1912,	...	...	...	·307	"

In comparison with other large towns, the rate per 100,000 for the ten years 1902-1911 was as follows:—\*

							1902-1911.	1912.
Glasgow,	...	...	...	...	...	...	71	†
Edinburgh,	...	...	...	...	...	...	36	
Dundee,	...	...	...	...	...	...	45	
Aberdeen,	...	...	...	...	...	...	46	
Paisley,	...	...	...	...	...	...	49	
Greenock,	...	...	...	...	...	...	53	
London,	...	...	...	...	...	...	30	22
Liverpool,	...	...	...	...	...	...	43	36
Manchester,	...	...	...	...	...	...	37	41
Birmingham,	...	...	...	...	...	...	40	39

† Figures not available.

The Ward distribution of the disease is shown in Appendix Table XXXII.

The total deaths, deaths occurring in hospital, and the proportion which these form to the total deaths in each year since 1895, are shown in the following Table:—

### WHOOPIING-COUGH.

YEAR.	DEATHS.		Death-rate per Million.	Percentage of Deaths occurring in Hospital.
	Total Number.	Number occurring in Hospital.		
1895	614	48	886	7·8
1896	643	68	914	10·6
1897	842	80	1,177	9·5
1898	703	86	961	12·2
1899	323	23	432	7·1
1900	694	67	918	9·7
1901	850	72	1,116	8·5
1902	466	59	600	12·7
1903	604	71	772	11·7
1904	574	96	731	16·7
1905	621	100	791	16·1
1906	400	94	498	23·5
1907	872	231	1,081	26·5
1908	526	131	656	24·9
1909	775	188	968	24·3
1910	232	74	291	31·9
1911	625	180	797	28·8
1912	241	58	307	24·1

\* Registrar-General's Annual Report.

## DIARRHŒAL DISEASES.

The deaths registered as due to diarrhœal diseases in 1912 numbered 397, representing a death-rate of 506 per million. For the previous year the rate was 897 per million. These rates are strictly comparable, but it has to be remarked that the diseases included within this group are now in accordance with the International classification adopted both by the Registrar-General and by the Local Government Board. The group now includes the following diseases:—epidemic diarrhœa, epidemic enteritis, infective enteritis, zymotic enteritis, summer diarrhœa, choleraic diarrhœa, cholera (other than Asiatic), gastro-enteritis, gastro-intestinal catarrh, muco-enteritis, colitis, and the figures below have been recast on this basis since 1906, in order to afford a comparison with recent years.

For several periods this rate has been—

1881-1890,	...	...	...	...	...	700 per 1,000 living.
1891-1900,	...	...	...	...	...	843 "
1901-1905,	...	...	...	...	...	849 "
1906,	...	...	...	...	...	933 "
1907,	...	...	...	...	...	587 "
1908,	...	...	...	...	...	860 "
1909,	...	...	...	...	...	547 "
1910,	...	...	...	...	...	753 "
1911,	...	...	...	...	...	897 "
1912,	...	...	...	...	...	506 "

On the basis of the Registrar-General's returns, the death-rate of Glasgow may be compared with several other towns:—

	Death-rate per 100,000.* 1902-1911.						
Glasgow,	...	...	...	...	...	...	35
Edinburgh,	...	...	...	...	...	...	18
Dundee, ...	...	...	...	...	...	...	62
Aberdeen,	...	...	...	...	...	...	24
Paisley,	...	...	...	...	...	...	36
Greenock,	...	...	...	...	...	...	36
London,	...	...	...	...	...	...	66
Liverpool,	...	...	...	...	...	...	125
Manchester,	...	...	...	...	...	...	93
Birmingham,	...	...	...	...	...	...	97

\* Compiled from Registrar-General's Annual Report.

## AGE INCIDENCE OF DIARRHŒAL DEATHS.

The tendency of the disease towards increased prevalence in the third quarter of the year and its special incidence during this period in infancy and during the second year is illustrated by the figures in the first of the subjoined Tables. The average range of temperature during summer and autumn seems largely to affect the prevalence of the disease in the third quarter, and the low mean temperature during August is reflected in the limited increase in the number of deaths registered during the third quarter.

## GLASGOW, 1911.—AGE-INCIDENCE OF DIARRHŒAL DEATHS.

1911.	Under 1 year.	—2.	—5.	—15.	—25.	—45.	—65.	65 years and upwards.
1st Quarter, ...	36	10	2	...	1	1	1	2
2nd " ...	46	9	6	3	...	...	4	5
3rd " ...	120	38	8	5	...	4	5	4
4th " ...	48	15	12	1	2	3	1	5
Year, ...	250	72	28	9	3	8	11	16

The relation between the mean temperature during June to September and the autumnal prevalence of the disease may be shown thus:—

	1907.		1908.		1909.		1910.		1911.		1912.	
	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.	Mean Temp. in Shade.	Deaths under 1 year.
June, -	51°·2	17	55°·2	3	53°·7	3	55°·7	4	56°·4	15	54°·3	22
July, -	56°·1	15	57°·8	13	55°·5	1	56°·5	6	60°·5	43	58°·1	38
August, -	54°·2	28	56°·2	53	56°·8	18	57°·0	31	60°·7	144	53°·1	56
September,	54°·1	48	54°·2	23	51°·4	17	53°·8	27	53°·6	115	50°·7	26

The Ward distribution of the deaths is shown in Appendix Table XXXIII.

A leaflet on the causes of summer diarrhœa was issued by the Corporation subsequent to the following Report:—

*Extract from Minute of 14th August, 1912.*

#### DIARRHŒA.

During the weeks ending 6th, 13th, 20th, and 27th July respectively, the deaths registered as due to diarrhœa and the allied forms of intestinal diseases among infants under one year numbered respectively 2, 0, 7, and 16.

Of these, 9 were breast-fed, 2 were on breast and cows' milk, and 14 were fed wholly on artificial food, 11 being on cows' milk, and 3 on other forms of infant foods.

The mean temperature rose from 58·4 in the first week to 59·2 and 60·7 in the second and third weeks, but fell during the fourth week to 58·3.

The age distribution of these deaths is significant, there being 1 death only under one month, 8 in the second and third months, 6 between three and six months, and 10 between six and nine months.

The periods of greater incidence here indicated correspond with those of recognised difficulty in the feeding of children. We have come to recognise that the milk supply of many mothers tends to fail during the second and third months of nursing, while, for children who are not exposed to this risk, the period of weaning, which usually begins somewhere between the sixth and ninth month, constitutes another period of danger, and both points are reflected in the figures above quoted.

The place distribution of the deaths supplies a suggestion for administrative measures. Thirteen of the deaths occurred in Dalmarnock, Calton, Mile-end, and Whitevale Wards, while 8 were in the Thistle Street and South Wellington Street areas on the South-side in Blackfriars, Hutchesontown, and Gorbals Wards.

In these areas the co-operation of the Cleansing Department is being invited to carry out frequent hose-washing of courts and the regular removal of garbage from the roofs of out-houses, &c., and special attention should also be directed to the lime-washing of ashpits in them.

Regarding domestic measures, the utmost cleanliness is required if food stuffs are to be protected from infection by dust or flies. It is desirable to draw the attention of mothers of children who are being fed on cows' milk to the protection which is afforded by simply bringing it "through the boil" immediately before use. It should not be boiled for any time, but just raised to boiling point, and then cooled by placing the dish containing it in cold water. Any milk remaining in the bottle after the child is satisfied should not be used a second time, and during the interval between feeds the bottle, after thorough cleansing, should be



immersed and kept in cold clear water. The authority of the Committee is asked for the issue of the leaflet which accompanies this report :—

## CORPORATION OF GLASGOW.

### DIARRHŒA AMONG INFANTS.

The Health Committee of the Corporation of Glasgow desire to draw the attention of the mothers and guardians of children to the dangers which surround infant life during the late summer and autumn months.

During July, August, and September, diarrhœal affections are extremely common.

In children, but especially in nurslings, these are always serious and frequently fatal, and should never be left untreated.

Children, but particularly infants fed on the bottle, are especially liable to the disease.

Mothers' milk is always pure; but cows' milk, especially as sold and kept in open vessels, almost always becomes contaminated with dust, and sometimes with the germ which causes summer diarrhœa.

Weaning should, when possible, be avoided at this period; but if the child must be weaned, because of the mother's health or its own, this should be done with the greatest care and under the direction of the family doctor.

#### MATTERS WHICH MUST BE ATTENDED TO IF DIARRHŒA IS TO BE AVOIDED.

- (1) The house itself must be kept clean and well aired. Fly-paper should be used for the destruction of flies, which frequently carry infection to food. Avoid dry dusting and sweeping. Wipe the furniture only with a damp cloth, and scrub or wash the floor.
- (2) All food, but especially milk, should be kept covered from dust and flies by gauze or other material.
- (3) In preparing cows' milk for infants it should be heated just to boiling point, but not boiled, and then rapidly cooled by placing the vessel containing it in cold water, covering the milk meanwhile by a clean rag or piece of muslin to keep out the dust.
- (4) No refuse food should be left lying about, but kept in a covered vessel until disposed of.
- (5) *Cleanliness of the Person.*—The greatest care should also be taken to keep the children clean, both in body and clothing. A daily bath is essential.

A. K. CHALMERS,  
*Medical Officer of Health.*

Sanitary Chambers,  
Glasgow, 30th July, 1912.

### TROPICAL DYSENTERY.

The attention of the Local Authority was directed to the occurrence of several cases of tropical dysentery, as related in the following Reports :—

#### *Extract from Minute of 23rd October, 1912.*

Dr. Wright has prepared the following notes regarding the occurrence of several cases of tropical dysentery in Glasgow, and I think it well to draw attention to them because it is unusual to find the disease occurring among the resident population. It should be observed, however, that one of the cases described repeats the experience of about nine years ago, when two foreign seamen (members of the crew of a foreign ship trading with Cuba) were removed suffering from the disease. It had, however, in their case, been contracted abroad.



Tropical dysentery is probably unknown in this country, save in the case of those who have contracted the disease abroad, but in the following cases which fall to be noted (two groups of several cases each, and one isolated case), the clinical symptoms were similar in type, and in one fatal case among those occurring in residents of the City, *post-mortem* appearances were identical with those presented by another patient, a native of India, who formed one of the crew of a ship trading with South Africa.

The clinical history and the *post-mortem* appearance of cases in the first group presented the usual characteristic lesions of dysentery, and there is little doubt that all were suffering from the same disease.

The second group of cases, although presenting clinically all the symptoms of dysentery, are to be regarded as cases of "infective enteritis," owing to the result of the bacteriological examination of the blood and discharges.

The last single case, however, was definitely one of dysentery, as proved by *post-mortem* and bacteriological examination.

*Circumstances under which First Group occurred.*

Four members of one family, residing on the south-side, were removed to Ruchill Hospital on 12th September last. On 14th September, another sister, 13 years, developed the disease, and was removed to hospital the following day.

The first case, a boy of 4½ years, sickened on 2nd September; a sister, 11 years, sickened on 8th; his mother and another sister, aged respectively 40 and 7 years, on 9th September. As an interval of six to twelve days elapsed between the sickening of the first and subsequent cases, it may reasonably be concluded that infection was taken into the house by the first case. It is significant also that the first, third, and fourth cases occupied a bed in the kitchen, and the second and fifth cases a bed in the parlour. The only other members of the family—father and son—slept together in a bedroom and escaped infection.

On making enquiry regarding possible source of infection, it was learned that two French ketches had discharged a cargo of onions during July and August at the dock close to where this family reside. The boy, who first sickened, was stated to have occasionally frequented the docks, and may thus have obtained his infection therefrom. He died in hospital on 15th September.

*Circumstances under which Second Group occurred.*

All the members of one family (six in number) were here affected, and were removed to hospital on 8th October from a two-apartment house in Bellgrove, about two miles from the docks.

The first case, a girl aged 5 years, sickened on 25th September; her brother, aged 2 years, and mother, aged 33 years, sickened on 5th October; another brother, aged 10 years, on 6th October; the father, aged 33 years, on 7th October; and the last remaining member of the family, a brother, aged 8 years, on 8th October. Thus, an interval of ten days elapsed between the sickening of the first and the two cases next following, and eleven to thirteen days between the first and the last three cases.

As in the group of cases already mentioned, it is evident that the original case (girl) brought the infection to the house.

Exhaustive enquiry was made into the possible source of infection, with negative result.

With the exception of one death in the first group, all the others have made a good recovery.

SINGLE CASE ON BOARD SHIP.

This case occurred in a native of India employed as a cook on board a vessel which arrived in Glasgow on 14th October from Natal. He had sickened on 13th October, with profuse diarrhoea and discharge of blood. On arrival in Glasgow he was removed to hospital, where he died on 16th October. There was no history of earlier illness on board ship, either of himself or of other members of the crew during the voyage.

The vessel left Natal on 11th August, calling at Teneriffe, Calais, Antwerp, and three home ports before arriving in Glasgow.

She left Glasgow with all well on board on 17th October.

*Extract from Minute of 20th November, 1912.*

#### AMOEBIC DYSENTERY.

In a former report the attention of the Committee was directed to the occurrence of certain cases of tropical dysentery associated with proximity to the docks. Since this, illustration of another form of this disease, known as amoebic dysentery, has been recognised in a patient admitted to Belvidere, notified as suffering from enteric fever.

The case occurred in a man, aged 45 years, who was quartermaster on board a vessel trading with Indian and Mediterranean ports. His home was in Glasgow, where his ship arrived on October 22nd. Although he did not complain while on board ship or at the time of arrival, he subsequently stated that he felt in indifferent health from 8th October, which was fourteen days before the vessel arrived in Glasgow. He was removed to hospital on 5th, and died on 10th November. All the other members of the crew were reported well.

It falls to be noted that the case was associated with abscess of the liver, a feature which is never present in the other form of tropical dysentery above referred to, and the specific organism of the disease was recovered from the liver abscess.

#### TUBERCULOUS DISEASES.

##### PHTHISIS.

Tuberculosis of the lung or pulmonary phthisis was included under the Infectious Disease (Notification) Act, in 1910, and during the year 2,340 cases were registered, giving an attack-rate of 2,983 per million. The deaths registered during the same period numbered 1,034, which is equal to a death-rate of 1,318 per million living, and is slightly in excess of that for the previous year, which was 1,305 per million, and the second lowest recorded.

For several periods the death-rate has been as follows:—

1881-90,	...	...	...	2·680	per 1,000 living.
1891-1900,	...	...	...	2·015	„
1901-1905,	...	...	...	1·626	„
1906,	...	...	...	1·513	„
1907,	...	...	...	1·562	„
1908,	...	...	...	1·417	„
1909,	...	...	...	1·409	„
1910,	...	...	...	1·297	„
1911,	...	...	...	1·305	„
1912,	...	...	...	1·318	„

In several towns in Scotland the death-rate for the ten years, 1902-1911, has been:—

##### PHTHISIS DEATH-RATE PER 100,000 IN CERTAIN SCOTCH TOWNS FOR THE TEN YEARS, 1902-1911.

1902-1911.				1902-1911.			
Glasgow,	...	...	151	Aberdeen,	...	...	117
Edinburgh,	..	...	127	Paisley,	...	...	131
Dundee,	...	...	171	Greenock,	...	...	139

The reduction which has taken place in the phthisis death-rate in Glasgow during the whole period of registration is shown in the following Table:—

DEATH-RATE FROM PHTHISIS IN THE SEVERAL QUINQUENNIA SINCE THE BEGINNING OF REGISTRATION.

Years.	Death-rate per Million.	Years.	Death-rate per Million.
1855-9, ... ..	3,742	1885-9, ... ..	2,601
1860-4, ... ..	4,094	1890-4, ... ..	2,315
1865-9, ... ..	3,972	1895-9, ... ..	2,014
1870-4, ... ..	3,908	1900-4, ... ..	1,712
1875-9, ... ..	3,644	1905-9, ... ..	1,468
1880-4, ... ..	3,140	1910, ... ..	1,297
1911, ... ..	...	...	1,305
1912, ... ..	...	...	1,318

Appendix Table XXXIV. shows the number of cases and deaths in each Ward, together with the attack and death-rates for 1912. For purposes of comparison, the death-rates since 1903 are also shown.

Relatively the disease was most prevalent in Cowcaddens, Calton, Blackfriars, and Dalmarnock, where the attack-rates were 4,444, 3,894, 3,731, and 3,372 per million. In other five Wards, Kingston, Whitevale, Hutchesontown, Mile-end, and Townhead, the mean rate of 2,983 for the City was exceeded in the order named, the highest of these, Kingston, having a rate of 3,181 per million, and the lowest, Townhead, a rate of 3,047 per million.

Notification having now been in force for three years, the irregularities incidental to its introduction are to some extent eliminated, so that notifications refer only to occurring cases, and the rates already quoted afford a fair indication of the distribution of the disease throughout the City. Until further experience has been obtained, however, a more reliable measure of the incidence of the disease is by comparison of the average death-rates for each Ward over several years, and in the following Table these rates are arranged relatively to their position above and below the mean rate for the City.

On this basis the disease is considerably in excess in Calton, Blackfriars, and Cowcaddens, where it exceeds 1,800 per million, while the rate in Broomielaw, Mile-end, Whitevale, and Hutchesontown is also in excess of the City mean.

GLASGOW, 1903-1912.—PULMONARY PHTHISIS. TABLE SHOWING AVERAGE DEATH-RATE FOR EACH WARD COMPARED WITH THAT FOR THE CITY.

Ward.	Death-rate per Million.	Ward.	Death-rate per Million.
Calton, ... ..	1,898	Dalmarnock, ... ..	1,303
Blackfriars, ... ..	1,872	Exchange, ... ..	1,218
Cowcaddens, ... ..	1,841	Sandyford, ... ..	1,173
Broomielaw, ... ..	1,614	Maryhill, ... ..	1,113
Mile-end, ... ..	1,556	Woodside, ... ..	1,105
Whitevale, ... ..	1,501	Govanhill, ... ..	1,103
Hutchesontown, ... ..	1,474	Cowlairs, ... ..	1,077
CITY, ... ..	1,451	Dennistoun, ... ..	851
Springburn, ... ..	1,440	Park, ... ..	643
Kingston, ... ..	1,414	Blythwood, ... ..	633
Anderston, ... ..	1,400	Langside, ... ..	617
Gorbals, ... ..	1,326	Pollokshields, ... ..	466
Kinning Park, ... ..	1,310	Kelvinside, ... ..	296
Townhead, ... ..	1,309		



## ADMINISTRATIVE TREATMENT.

The National Insurance Act, 1911, gives specific power to Local Authorities for the treatment of tuberculosis either in the home, hospital, or sanatorium (sec. 16 (1) b). The question of finance is dealt with in several sections of the Act, and was more fully considered in an Interim Report issued by the Astor Committee, and supplemented in a Memorandum by the Local Government Board in May, 1912. As suggested by that Memorandum, a Report by the Medical Officer was submitted to the Committee on Health, and will be found in Appendix IV.

The development of the scheme for the administrative treatment of pulmonary tuberculosis has proceeded on the general lines of this special report, and may be summarised in the following Memorandum, which was submitted for the information of the Health Committee on 2nd April, 1913:—

SCHEME FOR THE ADMINISTRATIVE TREATMENT OF  
PULMONARY PHTHISIS.

The Corporation of Glasgow have from time to time had under consideration the several steps requisite to the development of a scheme for dealing with pulmonary tuberculosis.

It is unnecessary to describe these prior to the introduction of compulsory notification beyond saying that in one form or another the question has been under consideration for considerably over twenty years.

Voluntary notification from Hospitals, Dispensaries, and other Institutions for the treatment of the sick began in 1902, but with the introduction of compulsory notification in 1910, and the opening of five Municipal Dispensaries, the movement began to assume a more definite form.

The enquiry which was then begun into the condition of houses and families who had members suffering from the disease disclosed the extent of the need for hospital accommodation for acute and advanced cases, and also for the purpose of selecting those for whom sanatorium accommodation proper might prove advantageous.

It also revealed defects in the existing Dispensary provision, and the need for a Preventorium or Country Home for dealing with children and young persons with a bias towards incipient tuberculosis, and for extending the methods of Home Supervision.

The results of the enquiry were embodied in a Report by the Medical Officer which was submitted to the Committee in October, 1911, and the recommendations which it contained were adopted by the Corporation on December 29th of the same year. On this date the Corporation agreed:—

“To recommend that the Hospital Buildings about to be erected on Rob-royston Estate be made available for the treatment of consumption.”

“To confer with the School Boards and the Parish Councils in the City regarding a proposed Country Home, with which might be associated an Open-air School for tubercular children; and also regarding the home treatment of consumption, where assistance, financial or otherwise, is required.”

The Interim Report of the Departmental Committee on Tuberculosis was issued in the spring of 1912, and in June following the Medical Officer again reported on the subject, with special reference to the adaptation of existing provisions to the Scheme outlined in that Report.

The extension of the City boundaries followed in November, 1912, and necessitated substantial addition to the provision formerly made for the older area.

It is to the extended area that the following description applies.

The object of the Local Authority is to make the work a direct extension of the Public Health Service. The Medical Officer of Health is the Administrative Tuberculosis Officer. Acting in co-operation with him there is a Chief Tuberculosis Officer, under whose direction are Assistant Tuberculosis Officers, and a staff

of nurses allocated to the several Dispensaries, and for the purpose of house-visitation in the districts in which these are situated. The requisite complement of clerks for Central Registration and for Dispensary purposes has been provided or sanctioned, and a separate office has been provided to accommodate the Central Staff. The appointment of the Dispensers has been approved of, and their selection will proceed *pari passu* with the extension of the Dispensaries.

DISPENSARIES.—At the present time six Dispensaries are in operation, but certain changes are in progress. To replace the Dispensaries which were established when pulmonary tuberculosis were made notifiable (1)\* sites have been obtained at—

- (1) Black Street;
- (2) Clarendon Street; and
- (3) Brown Street, Bridgeton.

Plans have been prepared and estimates obtained for the erection of the Black Street Dispensary, and buildings similar in character, but probably altered somewhat in arrangement in order to adapt them to the different sites, will be erected at Clarendon Street and Brown Street.

To supply the western portion of the older City area a lease has been obtained of a self-contained house in Elmbank Crescent, and the internal arrangements adapted to dispensary purposes. Similar provision has been made at Adelphi Street to supply the south-eastern portion of the City. The former is now in operation, and the latter will be in the course of a few weeks.

*Govan District.*—At the time of annexation there was already established a Dispensary in the Burgh Chambers, and this is being continued, certain alterations being under consideration in order to render the accommodation more ample.

In the areas which these six Dispensaries will ultimately provide for, the work is now being carried on in the Dispensaries which they will replace.

Partick patients at the moment go either to Govan or Elmbank Crescent, but a local Dispensary is under consideration.

Record is being kept of the suitability of the Dispensary at present at Duke Street (which will be replaced by Black Street) for patients in outlying wards in Tollcross and Shettleston.

A like observation applies to the outlying portion in the southern area—Cathcart and Pollokshaws—and should it appear necessary, local Dispensary provision will undoubtedly be made. In any case, the seven Dispensaries already provided or under contemplation will be somewhat in excess of the proportion suggested in the Interim Report of the Departmental Committee.

MEDICAL AND NURSING STAFF.—The Medical Staff will be allocated as follows:—

Black Street,	...	...	One Assistant Tuberculosis Officer.
Adelphi Street,	...	...	" " " " "
Elmbank Crescent and			
Clarendon Street,	...	"	" " " " "
Govan and Partick,	...	"	" " " " "
Brown Street,	...	"	" " " " "

the Chief Tuberculosis Officer exercising general supervision and coupling up the work of the Dispensaries, Hospitals, Country Homes, &c.

For the purposes of domiciliary treatment the appointment of fourteen nurses, that is in the ratio of two for each Dispensary, has been approved. These nurses will assist in the work of the Dispensaries as well as visit the patients in their own homes. Permission has also been obtained to supply in carefully selected cases bed and, if necessary, bedding. As an assistance in this work the various charitable agencies of the City are largely made use of.

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\* (1) See Medical Officer's Report of June, 1912, Appendix IV.

DISPENSING AND CLERICAL STAFF.—This is to consist of one qualified dispenser and three assistants for the seven Dispensaries, and the clerical staff will number four, exclusive of three clerks attached to the Central Office.

HOSPITALS.—The present Hospital accommodation extends to three wards at Ruchill, two at Knightswood, and two at Shieldhall Hospitals, which provide 84 bed units of 2,000 cubic feet each.

Arrangements are being completed as rapidly as possible for the provision of 220 additional hospital beds at Ruchill for the observation and treatment of acute or incipient cases, and also for the admission of more advanced cases.

Further hospital accommodation to the extent of about 200 beds will also be provided at Robroyston for use at periods between the major prevalences of small-pox.

SANATORIA.—*Country Home*—Negotiations are proceeding for the acquisition of an estate of 320 acres in a rural area to the south of Glasgow, where it is proposed to erect a Country Home for Children to accommodate ultimately about 250, a portion of the ground to be used also for sanatorium purposes.

Negotiations have also been opened up with the Directors of Bellefield Sanatorium with a view to taking over and extending that Institution. There are at present 50 beds at Bellefield, and the ground is capable of a considerable addition to this number.

#### HOSPITAL ACCOMMODATION.

The question of hospital accommodation for phthisis cases in Glasgow has been under consideration during the year, as that which was available at Ruchill extended only to 64 beds, and at Knightswood and Shieldhall Hospitals to 10 beds each. Many cases of phthisis are still under treatment in the Parish Hospitals. Under the National Insurance Act sanatorium benefit is described as treatment in hospitals or sanatoria other than Parochial Hospitals.

The Corporation have agreed to provide additional accommodation at Ruchill Hospital for 220 patients, and the following Memorandum describing the proposed additions was prepared for the information of the Local Government Board:—

#### REPORT ON PLAN OF PROPOSED ADDITION TO RUCHILL HOSPITAL.

It is proposed to erect on ground adjoining Ruchill Hospital, and belonging to the Hospitals Committee, pavilions for the purpose of providing hospital accommodation for pulmonary tuberculosis. The plan now submitted shows the proposed situation of the building.

SITE AND EXTENT OF ACCOMMODATION.—In all there will be beds for 220 patients, and a central dormitory will provide rooms for 70 nurses and 35 cleaners.

Administratively the new wards will be worked as an annexe to Ruchill Hospital depending thereon for its water supply, drainage, steam and heating power, washing, and supplies generally.

For cooking also, to some extent, this will be the case, although an auxiliary kitchen will be provided, as afterwards described.

The area extends to  $13\frac{1}{4}$  acres, and has a sub-soil similar to that of the existing Hospital. Its main slope is towards the east and south.

ARRANGEMENT OF WARDS.—The pavilions will be arranged in sections of four on either side of a block containing nurses' and cleaners' dormitories. The interval between opposite walls of adjacent pavilions will be 80 feet, and between the ward centres 106 feet.

It is proposed to accommodate both sexes.



For convenience of description the pavilions may be regarded as uniform in type, but subject to slight modification, in order the better to adapt them to the requirements of acute and chronic cases. The only substantial difference, indeed, depends on the varying use to which the central section or ward of the pavilion will be put and the sub-division of the five-bed wards in each. In the acute pavilion the central ward or room will be occupied by beds, and the five-bed units will be divided into units of two and three respectively.

In the convalescent pavilions the central ward will be used as a dining-room and recreation room.

MEASUREMENTS.—The measurements of the pavilions are as follows:—Outside length, 160 feet. At each wing a section will be provided of seven beds, the central section—either a seven-bed ward or a dining-room as before described—and the intervening portions shown as five-bed wards in the plan, will retain this size in the convalescent ward, but in the acute wards will be divided into units of two and three beds respectively.

The internal measurement of the centre and wings will be 28 feet by 24 feet, the five-bed sections measuring 35 feet by 14 feet; in all cases the height from floor to ceiling will be 12 feet.

*Centre and Wings:—*

Floor area,	...	...	...	...	672 square feet.
Bed space,	...	...	...	...	96 „ each
Cubic space,	...	...	...	...	1,152 cubic feet per bed.

*Five-Bed Wards:—*

Floor area,	...	...	...	...	490 square feet.
Bed space,	...	...	...	...	98 „ each.
Cubic space,	...	...	...	...	1,176 cubic feet per bed.

VERANDAHS.—A verandah will extend along the south front of each pavilion. It will project 10 feet from the wall, will be carried on iron columns and covered with patent glazing. Along the northern face a service corridor will extend between the wings, 6 feet wide, and roofed in the same way, but closed in towards the north by a partition, solid to the extent of 3 feet from the ground, and thereafter having casement windows. The verandahs in both cases will be 7 feet in height, and thus leave 4 feet between the higher part of the verandah and the ceiling of the ward.

VENTILATION.—The verandahs will be ventilated towards the top at intervals corresponding to the windows.

The walls will be arranged so as to provide a succession of 3-foot butts and 4-foot windows; all openings on to both verandahs will extend to the floor level, and be fitted with a glazed French casement extending the whole height of the verandah. Above this the portion of the window over the verandah will be fitted with glazed hopper sashes opening inwards to an angle of 45 degrees.

The ceilings of the wards will be ventilated by means of ridge ventilators carried down to the level of the ceiling, and having a fret panel therein for extraction.

WARD ANNEXES.—Each pavilion will have three annexes entering off the northern verandah. The central one will contain kitchen and larder, linen room, a small laboratory, and a cloak-room. The kitchen will be fitted up with a hot plate, steam (or gas) dish sterilizer, and the ordinary sinks and racks for dishes.

The annexe at each wing will contain a bath-room, a lavatory with two wash-hand basins, separate water-closets for patients and nurses, with a sink-room containing slop sink, steep sink, and housemaids' sink, and a sterilizer for sputum mugs.

STRUCTURE.—The three wards at present to be erected can be nursed and supplied from the existing Hospital, but in connection with the further extension it is proposed to erect a home for 70 nurses and 35 cleaners, together with an auxiliary kitchen and stores, not shown in detail in the present plans.

It is proposed to erect the wards of the present portion of the scheme of composite material, similar to the three erected a few years ago to the east of the permanent buildings; but the Committee may think it desirable to experiment with several other types of construction for the remaining buildings.

HEATING.—It is proposed to heat all the wards by hot-water radiators from a calorifier situated under the eastmost annexe of each pavilion.

In addition, the seven-bed wards in the wings will each have a fireplace, and two will be provided in the central ward or dining-room as the case may be.

The hot water for domestic purposes will be supplied from a calorifier below the same annexe, and distributed to the various annexes in a channel below the north corridor.

In August, 1911, the Local Government Board issued the Public Health (Pulmonary Tuberculosis) Regulations, making the disease uniformly notifiable throughout Scotland. In Glasgow, however, the disease had been added to the list of notifiable diseases under the Infectious Disease (Notification) Act, 1889, in January, 1910, and details of all cases occurring during the three years have been tabulated, and will be reviewed in a later report. The following summary is introduced here in order to maintain a continuous record:—

#### SUMMARY OF CASES AS AT 1ST JANUARY, 1913.

The position of the cases registered during the three years ending December, 1912.

(1) Cases registered during 1910,	...	...	...	...	3,506
	1910	1911	1912	Total.	
Less—Died, ... ..	1,145	425	153	1,723	
Removed and not traced,	89	175	39	303	
Removed from Glasgow,	117	84	21	222	
	<u>1,351</u>	<u>684</u>	<u>213</u>	<u>2,248</u>	<u>2,248</u>
Cases registered during 1910 under observation at 31st Dec., 1912,					1,258
(2) Cases registered during 1911,	...	...	...	...	2,326
		1911	1912	Total.	
Less—Died, ... ..	...	688	308	996	
Removed and not traced,	...	88	55	143	
Removed from Glasgow,	...	87	68	155	
		<u>863</u>	<u>431</u>	<u>1,294</u>	<u>1,294</u>
Cases registered during 1911 under observation at 31st Dec., 1912,					1,032
(3) Cases registered during 1912,	...	...	...	...	2,330
Less—Died, ... ..	...	...	766		
Removed and not traced,	...	...	101		
Removed from Glasgow,	...	...	74		
					<u>941</u>
Cases registered during 1912 under observation at 31st Dec., 1912,					1,389
Total cases remaining under observation at 31st Dec., 1912,					<u>3,679</u>

Since compulsory notification was introduced, 8,162 cases have thus been registered by the department. Of the cases registered during 1910, 1,723 were dead by the end of 1912, while 525 more had either left the City or had been lost trace of at the end of the year. Of the 1911 cases, 96 were dead by the end of 1912, while 298 others had passed from observation. Of the 1912 cases, 766 died during the year, while 175 had passed from observation. On December 31, 1912, there remained under observation 3,679 cases within the old area of Glasgow.

*Cases Registered during 1912.*—As shown above, the number of cases registered during the year 1912 was 2,330. Of these, 2,110 were notified in terms of the Infectious Disease (Notification) Act, 1889, and Tuberculosis Regulations, 1912, while 220 were ascertained from other sources, as shown below.

I. *Source of Notified Cases*—

1. Occurring in private practice, ... ..	1,092
2. Occurring in public practice—	
(a) Poor Law cases at home addresses, ...	175
Poor Law cases from hospitals and	
poorhouses, ... ..	168
Poor Law cases at dispensaries, ...	68
	— 411
(b) Charitable dispensaries and infirmaries, ...	451
Corporation dispensaries, ... ..	156
	— 607
	— 1,018
Total cases notified, ... ..	2,110

II. *Source of information in cases not notified*—

(a) From admission and dismissal sheets of Poor Law	
Institutions, ... ..	154
(b) School Medical Officers, ... ..	15
(c) Port Local Authority, ... ..	1
(d) County Medical Officer, ... ..	15
(e) From death cards only, ... ..	35
	— 220
Total cases registered, ... ..	2,330

*Deaths among Registered Cases.*—In cases where the first information regarding the occurrence of the disease was obtained from the death registers enquiry was made at the medical practitioner certifying the death regarding the omission to notify, and the explanation given in the majority of cases was that the doctor certifying the death had only seen the patient a day or two before death, and had reason to believe that notification had already been made by some other party. The omissions to notify during 1910 numbered 198, but fell to 80 during 1911, and to 35 during 1912, which is equal to 3 per cent. only of the total deaths occurring in the latter year.

*Place of Residence at Time of Registration.*—When a patient is notified from a home address this is visited, and if the case can be definitely located the patient is regarded as a “home” case, even although at the time of notification he is under treatment in an institution. The results of these enquiries may be summarised as follows:—

Cases traced to home addresses, ... ..	1,947
Cases at home but not visited at request of medical attendant, ...	24
Cases where only known address was an institution, ... ..	225
Cases not found at address given (mostly from Poor Law Institutions	
and charitable dispensaries), ... ..	134
	—
	2,330



*Public and Private Notifications.*—The figures given in the foregoing summary refer to the total number of cases *registered* during the year, while the following Table refers only to notifications under the Act received regarding the 2,110 cases so notified :—

Notifications.	Private.	Public.	Total.	Percentage Public.
Primary, ... ..	1,092	1,018	2,110	48·2
Multiple, ... ..	340	856	1196	71·6
	<hr/>	<hr/>	<hr/>	<hr/>
	1,432	1,874	3,306	56·7
	<hr/>	<hr/>	<hr/>	<hr/>
Percentage multiple to primary notifications in each group,	31·1	84·1	56·7	...

*Age Distribution of Cases Registered.*—This information was not obtained in 225 cases which were under treatment in institutions; in 134 which were not found; and in 24 which were not visited at the request of the medical attendant. There thus remained 1,947 cases whose age distributions are as follows :—

Ages.	Cases.	Ages.	Cases.
– 5 years, ... ..	94	– 35 years, ... ..	459
– 10 „ ... ..	126	– 45 „ ... ..	364
– 15 „ ... ..	136	– 55 „ ... ..	189
– 20 „ ... ..	213	– 65 „ ... ..	92
– 25 „ ... ..	247	+ 65 „ ... ..	27
	<hr/>		<hr/>
	816		1,131
	<hr/>		
	1,947		
	<hr/>		

*Housing Accommodation of Patients.*—At the time of registration, 180 males and 45 females were under treatment in institutions—mostly those of the Poor Law—and had no other address which could be verified; while 962 males and 985 females were housed as follows :—

SIZE OF HOUSE.	Number.		Total.
	Males.	Females.	
1 apartment, ... ..	164	239	403
2 apartments, ... ..	537	526	1,063
3 „ ... ..	167	149	316
4 „ and up, ... ..	94	71	165
	<hr/>	<hr/>	<hr/>
Total at home, ... ..	962	985	1,947
In Institutions, ... ..	180	45	225
Not found, ... ..	86	48	134
Not enquired into, ... ..	10	14	24
	<hr/>	<hr/>	<hr/>
Total cases registered, ... ..	1,238	1,092	2,330

*Institutional Treatment.*—Of the cases registered during the year, 1,100 received institutional treatment, and the following summary indicates the nature of this:—

Patients from	Local Authority Hospitals.	Sanatoria.	General Hospitals.	Poor Law Institutions.	Total.
1 apartment, ...	4	19	1	202	226
2 apartments, ...	18	92	36	344	490
3 do., ...	12	46	8	45	111
4 do., and up,	1	25	2	20	48
	<u>35</u>	<u>182</u>	<u>47</u>	<u>611</u>	<u>875</u>

Patients under institutional treatment at time of registration (mostly Poor Law), ... ..	225
	<u>1,100</u>

It thus appears that 47 per cent. of the patients notified received institutional treatment in one form or another.

*National Insurance.*—The following Table shows an analysis of all cases of phthisis in Greater Glasgow in relation to insurance and housing as at the date mentioned therein:—

PULMONARY TUBERCULOSIS.—CASES AT HOME, IN HOSPITAL, AND SANATORIA,  
ON 25TH JANUARY, 1913.

			Insured.		Dependant of Insured Persons.		Not Insured or Not Known.		Deposit Con- tributors.		Total.		Grand Total.
			Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
HOME CASES.													
1 apartment,	...	90	32	26	170	38	31	2	3	156	236	392	
2 apartments,	...	407	92	146	409	133	66	4	1	690	568	1,258	
3 do.,	...	114	39	25	75	49	38	1	1	189	153	342	
4 do.	and up,	56	17	4	22	55	24	2	1	117	64	181	
Common Lodging- houses,	...	...	...	30	40	12	...	...	...	40	42	82	
		667	180	201	706	315	171	9	6	1,192	1,063	2,255	
Poor-law Hospitals,	...	44	13	6	121	369	36	...	2	419	172	591	
Local Authority Hospitals,	...	30	6	1	16	8	9	1	...	40	31	71	
Sanatoria, including Lanfine Home,	...	46	17	1	8	15	12	3	1	65	38	103	
		787	216	209	851	707	228	13	9	1,716	1,304	3,020	

#### ATTENDANCE AT DISPENSARIES.

537 consultations were held throughout the year at the five dispensaries for consumption conducted by the Corporation. 1,591 patients attended for the first time, while these and other patients who had been in attendance

during 1910 and 1911 made 9,933 subsequent visits. The attendances at each dispensary were as follows:—

Dispensary.	No. of Consultations.	Primary Attendance.		Subsequent Attendances.		Total Attendances.	
		Males.	Females.	Males.	Females.	Males.	Females.
Broad Street, -	126	224	319	1,232	1,379	1,456	1,698
Duke Street, -	101	70	87	1,225	891	1,295	978
St. Vincent Street, -	101	66	105	576	1,495	642	1,600
Possil Road, -	108	208	264	1,073	1,604	1,281	1,868
Nicholson Street, -	101	106	142	260	198	366	340
Total, -	537	674	917	4,366	5,567	5,040	6,484
		1,591		9,933		11,524	

### HOME VISITATION BY NURSES.

Of the cases notified during the year, 1,438 were visited at home by the nursing staff, while 225 cases notified in the previous year were also visited during the year for the first time. To these 1,663 cases and to cases under visitation at the beginning of the year the nurses made 12,558 home visits. In addition, each nurse on the staff attended the dispensary consultations held in her district.

The information summarised above gives a general outline of the work in connection with the treatment of consumption which the department is undertaking. A large amount of detail has been and is still being collected in regard to cases notified or under observation which will form the subject of a more extended report later.

### OTHER FORMS OF TUBERCULOUS DISEASE.

The following Table contains the deaths and death-rates of the several forms of tuberculous diseases taken from the Registrar-General's classification. Owing to the Registrar-General's Report for 1912 not being available, the figures for that year are not shown:—

GLASGOW.—TUBERCULOUS DISEASES.—DEATHS and DEATH-RATES per MILLION in each YEAR since 1894.\*

YEAR.	DEATHS.					DEATH-RATE PER MILLION.				
	Tubercular Meningitis.	Other Forms of Tuberculosis.	Tuberculous Diseases (Not Phthisis).	Phthisis.	All Tuberculous Diseases.	Tubercular Meningitis.	Other Forms of Tuberculosis.	Other Tuberculous Diseases (Not Phthisis).	Phthisis.	All Tuberculous Diseases.
1894	229	354	583	1,560	2,143	333	515	848	2,271	3,119
1895	229	398	627	1,584	2,211	329	572	901	2,276	3,177
1896	246	327	573	1,342	1,915	349	464	813	1,903	2,716
1897	266	341	607	1,434	2,041	372	477	849	2,006	2,855
1898	260	341	601	1,415	2,016	359	471	830	1,953	2,783
1899	240	406	646	1,454	2,100	327	553	880	1,981	2,861
1900	252	387	639	1,478	2,117	339	520	859	1,987	2,846
1901	238	458	696	1,392	2,088	311	599	910	1,821	2,731
1902	241	393	634	1,356	1,990	311	507	818	1,748	2,566
1903	235	424	659	1,342	2,001	299	539	838	1,705	2,543
1904	258	451	709	1,378	2,087	323	565	888	1,726	2,614
1905	245	409	654	1,233	1,887	302	505	807	1,522	2,329
1906	307	405	712	1,295	2,007	367	485	852	1,550	2,402
1907	390	446	836	1,314	2,150	460	526	986	1,550	2,536
1908	310	429	739	1,173	1,912	361	499	860	1,364	2,224
1909	297	419	716	1,178	1,894	341	480	821	1,351	2,172
1910	273	366	639	1,070	1,709	309	413	722	1,210	1,932
1911	253	388	641	998	1,639	322	495	817	1,272	2,089

\* From Registrar-General's Annual Reports.



Since the present classification of the “other forms” of tuberculous disease was introduced by the Registrar-General in 1883, a decrease in the death-rate therefrom amounting to 25 per cent. has occurred. As already stated, the figures for the present year are not available, but the following Table from the report of last year is repeated, in view of the fact that compulsory notification of all forms of tuberculosis is desirable, and is already in operation in England under the Notification and Treatment of Tuberculosis (General Diseases) Order, 1912.

GLASGOW, 1883-1911.—DEATH-RATES PER MILLION FROM TUBERCULOUS DISEASES IN SEVERAL PERIODS, 1883-1911.

	AVERAGE ANNUAL DEATH-RATE.					Per cent. decrease in 29 years.
	1883-88.	1889-94.	1895-1900.	1901-1906.	1911.	
I. Phthisis, ... ..	2,849	2,319	2,018	1,679	1,272	55·4
II. Tubercular Meningitis,	405	387	346	319	322	25·0
III. Other forms of Tuber- culosis, ... ..	685	497	510	533	495	
	1,090	884	856	852	817	
All Tuberculous Diseases,	3,939	3,203	2,874	2,531	2,089	47·0

The deaths and death-rates from diseases of the tuberculous class other than phthisis for the several Wards, with the corresponding rates for 1903-1911, are shown in Appendix Table No. XXXV. As in the case of phthisis, there is considerable fluctuation in the rates for individual Wards from year to year, but it again falls to be observed that there is no relation between the incidence of phthisis and of the other forms of tubercle. The Wards with the highest phthisis death-rates preserve a fair correspondence with those in which the general death-rate is excessive, and there is a close parallel between the distribution of other tuberculous diseases and phthisis itself. When the comparison is made on the basis of the house-distribution (see Appendix II.) of both diseases, the association appears to be with the family rather than with the topographical areas.

In order to obtain a wider view of the incidence of these other forms of tubercle, the following Table has been prepared, showing the average of the rates for the past nine years. On this average, Mile-end and Dalmarnock show excessive rates, while Whitevale, Calton, and Townhead are also considerably in excess of the City mean.

GLASGOW, 1903-1912.—TABLE SHOWING AVERAGE RATE FOR EACH WARD COMPARED WITH MEAN FOR THE CITY.

Ward.	Death-rate per Million.	Ward.	Death-rate per Million.
Mile-end, ... ..	1,337	Blackfriars, ... ..	972
Dalmarnock, ... ..	1,300	Exchange, ... ..	966
Whitevale, ... ..	1,242	Govanhill, ... ..	915
Calton, ... ..	1,240	Sandyford, ... ..	894
Townhead, ... ..	1,181	Gorbals, ... ..	867
Kinning Park, ... ..	1,175	Maryhill, ... ..	847
Springburn, ... ..	1,174	Dennistoun, ... ..	780
Cowcaddens, ... ..	1,132	Woodside, ... ..	746
Broomielaw, ... ..	1,131	Langside, ... ..	404
Cowlairs, ... ..	1,112	Blythwood, ... ..	395
Hutchesontown, ... ..	1,091	Park, ... ..	332
Anderston, ... ..	1,079	Pollokshields, ... ..	319
Kingston, ... ..	1,065	Kelvinside, ... ..	221
City, ... ..	986		

## TUBERCLE IN MILK.

During the year 1912, 668 samples of milk were received from the Veterinary Surgeon for examination for tubercle. Of these, 442 were from country byres, 178 from town byres, and 48 from byres from which milk is supplied to the City Fever Hospitals.

Last year 11 or 2·07 per cent. of the samples from country byres were found to be tuberculous, while 1 or 0·66 per cent. from town byres was also affected. During the present year in no instance was tubercle found.

As formerly, the herds supplying milk for the hospitals were subjected to the tuberculin test, and the result obtained during the past three years is highly satisfactory.

A comparison over several years may be shown as follows:—

Year.	Where Samples taken.	Number of Samples.	Number found Tuberculous.	Percentage.
1907	Railway Stations, ...	163	7	4·3
1908	Country Byres, ...	417	18	4·3
	Town Byres, ...	108	5	4·6
	Byres from which Hospital Milk obtained, ...	174	4	2·3
1909	Country Byres, ...	423	24	5·7
	Town Byres, ...	122	4	3·3
	Byres from which Hospital Milk supplied, ...	47	...	...
1910	Country Byres, ...	466	6	1·29
	Town Byres, ...	163	2	1·23
	Byres from which Hospital milk supplied, ...	46	...	...
1911	Country Byres, ...	535	11	2·07
	Town Byres, ...	142	1	0·66
	Byres from which Hospital milk supplied, ...	58	...	...
1912	Country Byres, ...	442	...	...
	Town Byres, ...	178	...	...
	Byres from which Hospital milk supplied, ...	48	...	...

## DISEASES OF ORGANS OF RESPIRATION.

The deaths from respiratory diseases, including croup, but excluding pneumonia, numbered 1,187, giving a rate of 1,513 per million. The deaths from pneumonia numbered 1,378, representing a death-rate of 1,756 per million. From both causes together the deaths numbered 2,565, and represented a death-rate per million of 3,269, compared with 3,062 in 1911. The

death-rate from respiratory diseases for several periods per thousand of the population living has been :—

			Pneumonia.	Other Diseases of Respiration.	Total.
1881-90,	...	...	...	...	5·870
1891-1900,	...	...	...	...	4·993
1901-05,	...	...	...	...	4·141
1906,	...	...	1·657	1·770	3·427
1907,	...	...	1·934	1·676	3·610
1908,	...	...	1·860	1·741	3·601
1909,	...	...	2·046	1·987	4·033
1910,	...	...	1·494	1·349	2·843
1911,	...	...	1·618	1·444	3·062
1912,	...	...	1·756	1·513	3·296

The Ward distribution of the deaths from diseases of the respiratory system (including pneumonia) is shown in Appendix Table XXXVI., which contains, for convenience of reference, a column showing the combined death-rate from diseases of respiration and from pneumonia for 1912, as well as the total rate since 1903.

Taking the average rates for the years 1903-1912, the position of the several Wards in relation to the average rate for the City may be seen from the following Table :—

GLASGOW, 1903-1911.—TABLE SHOWING AVERAGE RATE FOR EACH WARD  
COMPARED WITH MEAN FOR THE CITY.

Ward.	Death-rate per Million.	Ward.	Death-rate per Million.
Broomielaw, ...	5,506	Springburn, ...	3,534
Blackfriars, ...	5,190	Sandyford, ...	3,417
Cowcaddens, ...	5,045	Maryhill, ...	3,138
Hutchesontown, ...	4,652	Exchange, ...	3,098
Calton, ...	4,648	Woodside, ...	3,035
Kinning Park, ...	4,291	Cowlairs, ...	2,996
Mile-end, ...	4,145	Govanhill, ...	2,775
Gorbals, ...	4,056	Dennistoun, ...	1,992
Dalmarnock, ...	3,983	Blythswood, ...	1,991
Townhead, ...	3,727	Park, ...	1,705
Anderston, ...	3,689	Langside, ...	1,395
Kingston, ...	3,664	Pollokshields, ...	1,077
Whitevale, ...	3,586	Kelvinside, ...	990
City, ...	<b>3,540</b>		

### PNEUMONIA.

The deaths and death-rates from pneumonia in the several Wards, with corresponding rates for each year since 1906, are shown in Appendix Table XXXVII.

The highest death-rate occurred in Blackfriars Ward, where it was equal to 2,989 per million persons living, as compared with 1,756 for the City as a whole. The rate was next highest in Calton, Hutchesontown, Mile-end, and Kingston, where the rates were 2,600, 2,511, 2,237, and 2,214 per million respectively.



The following Table shows the variations in the death-rate in several periods since 1856:—

GLASGOW.—PNEUMONIA.—DEATHS AND DEATH-RATES PER MILLION IN SEVERAL QUINQUENNIAL PERIODS, 1855-1911. Compiled from the Detailed Annual Reports of the Registrar-General, except 1910 to 1911, which are taken from the Annual Summaries.

PERIOD.	Population.	No. of Deaths.		Total.	Average Death-rate per Million.
		Male.	Female.		
1856-1860, ...	...	...	...	...	1,576
1861-1865, ...	...	...	...	...	1,370
1866-1870, ...	...	...	...	...	1,312
1871-1875, ...	...	...	...	...	1,536
1876-1880, ...	...	...	...	...	1,409
1881-1885, ...	...	...	...	...	1,949
1886-1890, ...	...	...	...	...	1,724
1891-1895, ...	...	...	...	...	2,056
1896-1900, ...	...	...	...	...	2,029
1901, ...	761,925	898	626	1,524	2,000
1902, ...	762,789	1,125	723	1,848	2,423
1903, ...	763,654	970	708	1,678	2,197
1904, ...	764,521	969	837	1,806	2,362
1905, ...	765,389	979	746	1,725	2,254
1906, ...	780,192	959	714	1,673	2,144
1907, ...	781,080	998	777	1,775	2,272
1908, ...	781,969	969	729	1,698	2,172
1909, ...	782,860	1,053	854	1,907	2,439
1910, ...	783,785	...	...	1,375	1,754
1911, ...	784,680	...	...	1,419	1,808
1912,* ...	...	...	...	...	...

NOTE.—For the annual numbers and rates before 1901 see Medical Officer's Annual Report for 1906, page 127.

\* Figures not available.

#### PUERPERAL FEVER.

From the Table which follows, it will be observed that the case-rate from puerperal fever per thousand births, viewed over a number of years, is apparently increasing, although the case-mortality-rate shows a tendency to fall, more especially since 1906. This contrast would seem to suggest that the greater supervision of infant lives has led to the inclusion of a larger proportion of the puerperal fever cases occurring.

The death-rate from erysipelas also shows a decrease when compared in quinquennial periods, the rate for this year being 36, as compared with 45 last year.

## PUERPERAL FEVER.—ERYSIPELAS.

Year.	PUERPERAL FEVER.				ERYSIPELAS.
	No of Cases Notified.	Case-rate per 1,000 Births.	Case-mortality per Cent.	Death-rate per Million Living.	Death-rate per Million Living.
1891	80	4.0	75.0	105	115
1892	63	2.8	68.3	64	84
1893	73	3.1	63.1	68	75
1894	64	2.8	54.7	51	83
1895	74	3.2	59.5	63	69
1896	105	4.4	53.3	79	55
1897	62	2.6	54.8	48	49
1898	71	2.9	53.5	52	40
1899	83	3.4	72.3	82	45
1900	78	3.2	74.3	78	32
1901	71	2.9	83.1	71	60
1902	90	3.6	55.5	51	51
1903	108	4.3	63.9	53	44
1904	89	3.6	66.3	53	53
1905	108	4.5	55.5	74	33
1906	119	4.8	48.7	69	62
1907	122	5.1	48.2	70	44
1908	119	5.0	47.9	66	29
1909	108	4.7	60.2	74	38
1910	113	5.1	56.6	72	34
1911	133	6.1	44.4	75	45
1912	142	6.5	42.3	76	36

The Rates quoted above are based on data obtained from the Registrar-General's Reports.

The case-mortality stated above must be taken with a good deal of reservation, especially in the earlier years, when it is probable that many of the milder cases were not notified.

## INCIDENCE OF PUERPERAL FEVER IN RELATION TO NATURE OF ATTENDANCE AT BIRTH.

The operation of the Notification of Births Act now enables us to review the incidence of puerperal fever in some detail. Of the 142 cases of the disease registered last year, 49 had been under medical care from the beginning, while 93 were attended by midwives at the onset of labour, although in 43 of these medical assistance was subsequently obtained.

Placed in relation to the nature of the attendance, the incidence of the cases is of some importance, and may be shown as follows:—

Attended by	Births.	Cases.	Rate per thousand Births.
Doctors, ... ..	10,517	49	4.7
Midwives, ... ..	12,251	93	7.6
	22,768	142	6.2

Before accepting these rates as final, and more particularly before accepting the greater relative incidence of puerperal fever in cases attended by

midwives as resulting from defective technique, it is necessary to remember that the midwives' practice is more frequently among the poorer classes and in the smaller houses, and that these are factors which, while incapable of express statement, must be taken into account when considering the difference in the incidence.

We still await the advantage which England derives from the Act of 1902, which places the midwives under regular medical supervision. A draft Bill has been prepared by the Society of Medical Officers of Health for Scotland.

The distribution of the cases throughout the Wards, and the nature of the attendance, are shown in Appendix Table XXXVIII.

*Interval elapsing between Confinement and the Development of Puerperal Fever.*—Here also there is a difference which is worthy of notice. Of the 49 cases medically attended, 35 occurred within the five days immediately following labour, whereas of the 93 cases attended by midwives the number occurring during a similar period was 47. A Table showing the details follows:—

GLASGOW, 1912.—TABLE SHOWING NUMBER OF DAYS ELAPSING BETWEEN CONFINEMENT AND DATE OF SICKENING FROM PUERPERAL FEVER.

How Attended.	Days.									Total.
	1	2	3	4	5	6	7	-15	15+	
Doctor, ... ..	7	7	5	9	7	4	3	6	1	49
	35					14				
Nurse, ... ..	13	9	15	6	4	10	7	19	10	93
	47					46				
										142

The following Tables also show the interval between confinement and sickening of cases which ended fatally, and the number of days elapsing between the day of sickening and the day of death:—

PUERPERAL DEATHS.

GLASGOW, 1912.—TABLE SHOWING NUMBER OF DAYS ELAPSING BETWEEN DATE OF CONFINEMENT AND DATE OF SICKENING.

How Attended.	Days.										Total.
	1	2	3	4	5	6	7	— 15	15 +		
Doctor, ... ..	5	3	3	3	2	2	1	2	...	21	
Nurse, ... ..	7	3	6	5	1	...	3	2	2	29	
	12	6	9	8	3	2	4	4	2	50	



GLASGOW, 1912.—TABLE SHOWING NUMBER OF DAYS ELAPSING BETWEEN DATE OF SICKENING AS STATED AND DATE OF DEATH.

How Attended.	Days.										Total.
	1	2	3	4	5	6	7	-15	15+		
Doctor, ... ..	1	...	2	5	1	1	3	6	2	21	
Nurse, ... ..	1	2	5	3	3	3	...	5	7	29	
	2	2	7	8	4	4	3	11	9	50	

### UNCERTIFIED DEATHS AND DEATHS WITHOUT MEDICAL ATTENDANCE.

In Appendix Tables XXXIX. and XL. the total deaths occurring during the years 1891-1900, and 1901-12, are stated, with the number and proportion uncertified and dying without medical attendance at all ages and under and over five years, together with a comparison of the proportions as affecting legitimate and illegitimate children under 1 and 5 years respectively, and in Table LX. of Appendix the numbers occurring in each class in the several Wards are given. Appendix Table LXI. gives corresponding information regarding the deaths occurring among members of Friendly Societies.

*Certification.*—At all ages, 1·0 per cent. of the deaths were uncertified, and 0·5 per cent. had no medical attendance. Under 5 years, however, 1·3 per cent. were uncertified, and 1·2 per cent. had no medical attendance. The greatest contrast is furnished by deaths occurring under 1 year. Among legitimate infants the proportion of those uncertified was 0·8 per cent., while among illegitimates it was 8·4 per cent. Of the legitimate children dying under one year, 43·3 per cent. were insured, a decrease of 1·3 per cent. from last year, while among illegitimates the proportion is only 12·1 per cent., which represents an increase of 1·1 per cent.

In the subjoined figures a comparison is established between the proportion of deaths uncertified in 1911 and 1912:—

NUMBER AND PROPORTION OF UNCERTIFIED DEATHS IN TOTAL DEATHS REGISTERED IN 1911 AND 1912.

	Under 5 Years.		Above 5 Years.		All Ages.	
	1911.	1912.	1911.	1912.	1911.	1912.
Total deaths, ... ..	4,806	4,449	8,092	8,311	12,898	12,760
Not certified, ... ..	74	56	105	76	179	132
Percentage, ... ..	1·5	1·3	1·3	0·9	1·4	1·0

### RABIES.

During the year the police reported, under the Rabies Order, 1897, the Dogs Order, 1906, and the Importation of Dogs Order, 1901, that 209 persons had been bitten by dogs, in 17 of whom the injury inflicted was classified as "severe," while the remaining 192 were of a more or less trifling character.

The greatest number occurred in the month of July, and the lowest in February.

The numbers occurring in each month, as well as their character, are shown in the following Tabulation:—

Months.					Severe.	Trifling.	Total.	
January, ...	...	...	...	...	4	4	}	17
February, ...	...	...	...	...	4	4		
March, ...	...	...	...	1	8	9		
April, ...	...	...	...	...	10	10	}	58
May, ...	...	...	...	3	27	30		
June, ...	...	...	...	4	14	18		
July, ...	...	...	...	3	40	43	}	93
August, ...	...	...	...	3	30	33		
September, ...	...	...	...	1	16	17		
October, ...	...	...	...	...	11	11	}	41
November, ...	...	...	...	1	11	12		
December, ...	...	...	...	1	17	18		
YEAR, ...					17	192	209	

#### GLANDERS.

No case of glanders was notified during the year.

#### ANTHRAX.

Two cases of anthrax occurring among the employees of Moore Street Slaughter-house were removed to hospital during the year. The circumstances under which the cases occurred were reported to the Committee on Health as follows:—

*Extract from Minute of date 8th May, 1912.*

A man, aged 32, was admitted to Ruchill Hospital from the Royal Infirmary on 30th ultimo, suffering from anthrax. The disease was in the form of a malignant pustule, affecting the middle finger of the right hand, caused through dressing the carcase of a cow which had died of anthrax—one of the stock belonging to an institution in Dumbartonshire. Soon after admission the pustule was excised, and the patient treated with curative serum, with the result that he has made a good recovery.

*Extract from Minute of date 20th November, 1912.*

An occasional employee at Moore Street Abattoir developed anthrax on 30th October last. He attended the Royal Infirmary Dispensary on the following day, and the nature of the illness being suspected, he was transferred to Ruchill Hospital. By this time a pustule had developed, which was at once excised, and the patient has since made a good recovery.

The history is important. On 23rd October he had been employed at Moore Street killing sheep, which had been forwarded from two farms in Lanarkshire and one in Fifeshire. During the operation his finger was pricked by a thorn entangled in the wool of one of the sheep, from which farm, however, he does not remember. It was over the site of this prick that the sore ultimately developed, and was first felt on 30th October.

There has been no recognised or suspected anthrax among the animals at Moore Street for many months past, but the incident of the killer's illness must be regarded as evidence that animals from an infected area have passed through the slaughter-house within the period referred to.

Intimations of the occurrence of anthrax in animals were received during the year as follows:—

6th February, bullock, Moore Street Slaughter-house.  
20th May, bullock, Moore Street Slaughter-house.

Persons known to have been in contact with these animals were kept under observation during the probable period of incubation, but in no case did any illness arise. In both cases the undressed carcasses were brought to the Glasgow Abattoir, when they were found to be infected with anthrax and destroyed. The usual precautions as to the cleansing and disinfection of the premises were taken.

### PTOMAINÉ POISONING.

The attention of the Department was directed to what appeared to be the occurrence of poisoning in a visitor, who reported that a fellow lodger had also been severely ill. Inquiry was made into the case, but no evidence of ptomaine poisoning was found.

### BACTERIOLOGICAL LABORATORY.

The following Report shows the work carried out by the Bacteriological Staff during the year. The figures for previous years are introduced for comparison.

There is, generally speaking, an increase in the numbers of last year, but it should be mentioned that from the date of extension of the boundaries, namely, 5th November, the examination of specimens which was formerly undertaken by the various Authorities of the added areas has been transferred here.

Dr. Buchanan tabulates the results of these examinations in the following manner:—

### SUMMARY REPORT BY BACTERIOLOGIST FOR YEAR 1912.

TABLE SHOWING THE NUMBER OF SPECIMENS SUBMITTED BY MEDICAL PRACTITIONERS FROM SUSPECTED CASES OF DIPHTHERIA, ENTERIC FEVER, and TUBERCULOSIS, DURING THE YEAR 1912, AS COMPARED WITH 1911.

MONTH.	DIPHTHERIA.		ENTERIC FEVER.		TUBERCULOSIS.		TOTAL.	
	1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.
January, - - -	252	199	88	47	139	208	479	454
February, - - -	196	229	69	59	184	210	449	498
March, - - -	222	239	47	66	218	198	487	503
April, - - -	178	173	50	42	172	182	400	397
May, - - -	167	184	41	98	212	173	420	455
June, - - -	192	194	34	46	156	162	382	402
July, - - -	139	132	59	35	103	131	301	298
August, - - -	180	172	68	49	119	156	367	377
September, - - -	207	216	76	32	130	170	413	418
October, - - -	247	280	44	29	165	189	456	498
November, - - -	268	338	57	42	148	223	473	603
December, - - -	241	265	61	40	157	233	459	538
TOTAL. . . .	2,489	2,621	694	585	1,903	2,235	5,086	5,441
Positive result obtained in - - -	31%.	28%.	25%.	24%.	32%.	31%.	31%.	29%.



TABLE SHOWING THE TOTAL NUMBER OF SPECIMENS FROM SUSPECTED CASES OF DIPHTHERIA, ENTERIC FEVER, AND TUBERCULOSIS ANNUALLY SENT TO THE LABORATORY FOR BACTERIOLOGICAL DIAGNOSIS BY THE MEDICAL PRACTITIONERS OF GLASGOW SINCE THE INAUGURATION OF THIS WORK ON 1ST JANUARY, 1900.

Year.	Diphtheria.	Enteric Fever.	Tuberculosis.	Total.
1900, - -	353	543	351	1,247
1901, - -	438	1,048	565	2,051
1902, - -	712	807	847	2,366
1903, - -	997	1,014	932	2,943
1904, - -	928	853	1,010	2,791
1905, - -	980	771	1,024	2,775
1906, - -	1,357	663	1,212	3,232
1907, - -	1,357	613	1,238	3,208
1908, - -	1,694	863	1,276	3,833
1909, - -	2,459	824	1,372	4,655
1910, - -	2,486	727	1,716	4,929
1911, - -	2,489	694	1,903	5,086
1912, - -	2,621	585	2,235	5,441
TOTALS, - -	18,871	10,005	15,681	44,557

In addition to the above routine, diagnostic examinations for the Medical Practitioners of the City, 1,566 specimens, have also been examined from Diphtheria Contacts, 963 from patients attending the Tuberculosis Dispensaries, and 364 from suspected cases of Ophthalmia Neonatorum. These are detailed respectively in the three tables which follow.

(1) DIPHTHERIA CONTACTS.

The systematic examination of all persons in more or less intimate contact with cases of Diphtheria (commenced in March, 1906) has been continued as far as possible. During the year the number of such contacts subjected to this method of examination amounted to 1,100, and the diphtheria bacillus was found in 164 or 14·9 per cent.

The positive contacts comprise two groups of persons—(1) those found on careful examination to have some departure from normal health locally (throat or nose) or constitutionally (anæmia or disturbance of pulse or temperature), and (2) persons showing no departure from perfect health either locally or constitutionally.

Year.	Diphtheria Contacts Examined.	Percentage Positive.
1906 (10 months)	322	10·5
1907	692	6·9
1908	841	9·2
1909	909	10·7
1910	1,067	11·4
1911	803*	12·2
1912	1,110*	14·9

\* 237 repeated examinations were made in 1911, and 466 in 1912.

## (2) TUBERCULOSIS DISPENSARIES.

The Bellefield Dispensary was commenced in the Sanitary Chambers in the beginning of 1906. The other five Tuberculosis Dispensaries, namely, Broad Street, Duke Street, Oakbank, St. Vincent Street, and Nicholson Street were instituted early in 1910. The undernoted figures for Govan Dispensary (instituted in September, 1912) are referable only to the period since the extension of the City Boundary.

During 1912 these institutions, collectively, have yielded 963 specimens of sputum for microscopical examination, as compared with 750 in 1911. The bacillus tuberculosis was found in an average of 23 per cent.

Month.	Broad Street.	Duke Street.	Oakbank.	St. Vincent Street.	Nicholson Street.	Bellefield (Sanitary Chambers).	Govan Dispensary.	Total.
January, ...	13	5	19	7	12	6	—	62
February, ...	24	5	19	8	21	14	—	91
March, ...	30	10	24	13	17	16	—	110
April, ...	34	5	18	11	16	5	—	89
May, ...	29	10	22	14	17	13	—	105
June, ...	6	7	15	15	13	15	—	71
July, ...	10	5	11	11	3	12	—	52
August, ...	13	10	17	11	11	2	—	64
September, ...	24	5	16	15	13	5	—	78
October, ...	29	9	21	3	12	3	—	77
November, ...	22	7	20	13	9	5	—	76
December, ...	27	10	23	6	6	2	14	88
Totals for 1912, ...	261	88	225	127	150	98	14	963
Positive result in, ...	18%.	16%.	13%.	27%.	25%.	52%.	57%.	23%.
Totals for 1911, ...	176	54	110	56	146	208	—	750
Positive result in, ...	24%.	31%.	19%.	44%.	26%.	60%.	—	36%.

## (3) OPHTHALMIA NEONATORUM.

With the introduction of notification of Ophthalmia Neonatorum on 1st August, 1911, suspected cases of the disease came under systematic laboratory diagnosis, and to facilitate the taking of specimens from the affected eyes a special equipment has been provided. In 1911 the total examinations numbered 48, and the positive results 22, or 45 per cent. In 1912 the number increased to 364, with positive results in 97, or 27 per cent.

1912.

	Pos.	Neg.	Total.
From Medical Officer of Health, - - -	86	247	333
From Medical Practitioners, - - -	11	20	31
Totals, - - - -	97 = 27%.	267	364

## INVESTIGATIONS.

Specimens of a miscellaneous nature were investigated for the Medical Officer of Health, the Sanitary Inspector, the Veterinary Surgeon, Baths Department, Water Department, and Medical Practitioners within the city. These numbered 1,186, and may be summarised as follows:—

*Medical Officer of Health—*(a) *Health Department—*

Enteric Fever—Search for <i>Bacillus Typhosus</i> in Urine (16),	
Fæces (16), Water (6), ... ..	38
Urine for Coliform Organisms, ... ..	3
Food-stuffs for Organisms—"Ham and Chicken" (1),	
Cream (1), Milk (12), ... ..	14
Wassermann Test—Blood, ... ..	1
Diphtheria—Swabs (3), Cats (2), ... ..	5
Bilharziosis—Urine, ... ..	10
Anthrax—Pus (1), Cultures (2), ... ..	3
Tuberculosis—Sputum (1), Urine (3), ... ..	4
Bacterial Diagnosis—Fæces (9), Urine (5), Pus (13), Cerebro-spinal fluid (1), Blood (1), Pleural fluid (1), Bile (1), Tissue (3), ... ..	34
Dysentery—Blood, ... ..	6
Insects from House, ... ..	1
Infantile Diarrhœa—Fæces (7), Flies from Infected Houses (4),	11
Favus in Mouse, ... ..	1
Bricks from Septic Tank, ... ..	2
	— 133

(b) *Hospitals—**Belvidere—*

Diphtheria—Cultures (23), Swabs (11), ... ..	34
Enteric Fever—Blood (15), Culture (1), ... ..	16
Cultures from Cerebro-spinal fluid for Organisms, ... ..	1
Cultures from Buboes for <i>Bacillus pestis</i> , ... ..	3
Dysentery—Fæces (7), Blood (6), ... ..	13
	— 67

*Ruchill—*

Diphtheria—Cultures, ... ..	18
Culture for <i>Bacillus dysenteriae</i> , ... ..	1
	— 19

*Sanitary Inspector—*

Examination of Milks, ... ..	4
Disease of Mice—Favus, ... ..	1
	— 5

*Baths Department—*

Examination of Samples of Water from Swimming Ponds, ...	11
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*Water Department—*

Sample of Water, ... ..	1
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*Veterinary Surgeon—*

Milk from Country Cows with Disease of the Udder, ..	418
Milk from Town Cows with Disease of the Udder, ...	184

(See following Table for results)

Tuberculosis—Swabs from Cows (123), Tissue (1), ... ..	124
Urine for Organisms, ... ..	2
	— 728



*Medical Practitioners—*

Tuberculosis—Urine (40), Pus (5), Tissue (3), Milk (7), Swabs (2), Sputum (3). Cerebro-spinal fluid (1), Faeces (1), Pleural fluid (2), ... ..	64
Bacterial Diagnosis—Urine (55), Pus (27), Swabs (2), Sputum (11), Cerebro-spinal fluid (2), Blood (6), Nasal discharge (2), Tissue (2), Faeces (2), Ascitic fluid (1), Pleural fluid (2), ... ..	112
Sputum for Inoculation, ... ..	5
Bilharziosis—Urine, ... ..	5
Vaccines—Pus (3), Blood (2), Swab (1), ... ..	6
Malaria—Blood, ... ..	1
Wassermann Test—Blood (3), Pus (1), ... ..	4
Urine for Bacillus typhosus, ... ..	1
Diphtheria—Virulence test of the Bacillus, ... ..	5
Malta Fever—Synovial fluid (1), Blood (1), ... ..	2
Pus for Staphylococcus aureus, ... ..	1
Gonorrhœa—Pus, ... ..	12
Dysentery—Faeces (1), Blood (1), ... ..	2
Anthrax—Serous fluid, ... ..	1
Tissue for Cancer, ... ..	1
	<hr/> 222
Total, =	<hr/> 1,186 <hr/>

## BOVINE TUBERCULOSIS.

The specimens of milk submitted by the Veterinary Surgeon from cows with disease of the udder have given the following results in the past four years, and indicate a striking progressive improvement:—

	1909.			1910.			1911.			1912.		
	Total Number.	Number Positive.	Per cent. Positive.	Total Number.	Number Positive.	Per cent. Positive.	Total Number.	Number Positive.	Per cent. Positive.	Total Number.	Number Positive.	Per cent. Positive.
Milk from country cows with disease of udder, - - -	467	24	5.1	506	6	1.18	584	11	1.88	484	0	0
Milk from town cows with disease of udder, - - -	125	4	3.3	169	8	1.18	151	1	0.66	184	0	0

## EXAMINATION OF RATS IN RELATION TO PLAGUE, 1912.

During the year 776 rats were brought to the Laboratory and examined for plague, with negative results.

The following table gives the numbers examined in relation to the places from which they were obtained, and in comparison to last year:—

Year.	From the City.	From Shipboard.	From Docks.	Total.	Plague Infected.
1912	114	583	79	776	—
1911	93	647	115	855	—

## EXAMINATION OF LOCH KATRINE WATER AS DRAWN FROM THE LABORATORY TAP.

Month.	Average No. of Bacteria in 1cc. as estimated in gelatine plate at Room Temperature.	Bacillus Coli present (+) or absent (-) in			Other bacilli of the B. Coli family present (+) or absent (-) in		
		10cc.	5cc.	1cc.	10cc.	5cc.	1cc.
January, - -	38	+	+	-	+	+	+
February, - -	79	+	+	-	+	+	+
March, - - -	28.5	+	-	-	+	+	-
April, - - -	30.5	-	-	-	+	+	+
May, - - -	24.6	-	-	-	+	+	+
June, - - -	35.5	-	-	-	+	+	-
July, - - -	39.5	-	-	-	+	-	-
August, - - -	16.1	+	+	-	+	+	-
September, - -	37	-	-	-	+	+	+
October, - - -	33	+	-	-	+	+	+
November, - -	36	-	-	-	+	+	-
December, - -	35.5	+	+	-	+	+	-

Bacillus Enteritidis Sporogenes was absent in 10cc. and Streptococci in 50cc. throughout the period.

R. M. BUCHANAN.

## HOSPITALS AND RECEPTION-HOUSES.

AN ACCOUNT OF THE HOSPITAL ACCOMMODATION AVAILABLE FOR PERSONS SUFFERING FROM INFECTIOUS DISEASE (INCLUDING THE MEANS PROVIDED FOR THE CONVEYANCE OF SUCH PERSONS, AND OF THE HOUSES OF RECEPTION, WITH OBSERVATIONS ON THE FURNISHING, MAINTENANCE, ADMINISTRATION, AND ADEQUACY OF SUCH ACCOMMODATION, &c.).

(a) *Hospitals*.—Table LXII. of the Appendix contains a statement of the number of beds available for epidemic disease at various periods since 1865, with the relative proportion per thousand of the population.

Appendix Tables Nos. LXIII., LXIV., and LXV. show the duration and cost of treatment in Hospital.

## HOURS AND CONDITIONS OF SERVICE OF NURSING STAFF.

Recently the question as to the hours of duty and conditions of service of the nurses in the Hospitals of the Local Authority led to the following Table being compiled from information kindly supplied by the Physician-Superintendents of the various hospitals included:—

# HOSPITALS.—Hours and Conditions of Service of Nursing Staff.

To the Salaries stated £30 per year should be added as representing Board, Lodging, Uniform, &c.

HOSPITALS.	WAGES.						HOURS OF DUTY PER WEEK OF SEVEN DAYS.			
	CHARGE.		STAFF.		PROBATIONER.		GRADE OF NURSE.			
	Minimum.	Maximum.	Minimum.	Maximum.	Minimum.	Maximum.	Charge.	Staff.	Night.	Probationer.
<b>GLASGOW—</b>										
<i>Fever Hospitals—</i>	£	£	£	£	£	£				
Belvidere, ... ..	36	45	27	33	18	24	60 $\frac{3}{4}$	60 $\frac{3}{4}$	79	60 $\frac{3}{4}$
Ruchill, ... ..	35	45	27	33	18	24	58 $\frac{1}{4}$	60 $\frac{1}{2}$	84	63 $\frac{3}{4}$
Knightswood, ... ..	35	45	...	...	18	24	56	...	84	61 $\frac{1}{2}$
Shieldhall, ... ..	36	45	27	36	18	24	65	65	84	65
<b>Average,</b>	<b>35 10/-</b>	<b>45</b>	<b>27</b>	<b>34</b>	<b>18</b>	<b>24</b>	<b>60</b>	<b>62</b>	<b>83</b>	<b>63</b>
<i>Poor Law Hospitals—</i>										
Stobhill, ... ..	30	40	...	...	10	20	69	...	84	72 $\frac{1}{2}$
Barnhill, ... ..	30	40	...	...	10	20	68 $\frac{1}{2}$	...	79 $\frac{1}{2}$	81 $\frac{1}{2}$
Eastern District, ... ..	30	40	...	...	10	20	61	...	82 $\frac{1}{4}$	61
<b>Average,</b>	<b>30</b>	<b>40</b>	<b>...</b>	<b>...</b>	<b>10</b>	<b>20</b>	<b>66</b>	<b>...</b>	<b>82</b>	<b>72</b>
<i>General Hospitals—</i>										
Royal Infirmary,† ... ..	35	40	30	35	12	25	69	72 $\frac{1}{2}$	79	66 $\frac{1}{2}$
Victoria, „ ... ..	30	40	25	29	12	20	70	67 $\frac{1}{2}$	80 $\frac{1}{2}$	67 $\frac{1}{2}$
Western, „ ... ..	30	40	25	28	10	15	68	71	79	71
<b>Average,</b>	<b>31 8/-</b>	<b>40</b>	<b>26 13/4</b>	<b>30 13/4</b>	<b>11 6/8</b>	<b>20</b>	<b>69</b>	<b>70</b>	<b>79<math>\frac{1}{2}</math></b>	<b>68</b>
<b>SCOTLAND—Others—Fever Hospitals</b>										
Edinburgh, ... ..	35	50	24	28	16	22	62	68 $\frac{1}{2}$	72	73 $\frac{1}{2}$
Leith, ... ..	35	40	27	30	16	18	63	70	80	70
Greenock, ... ..	36	45	27	33	18	24	70 $\frac{1}{4}$	75 $\frac{1}{2}$	84	75 $\frac{1}{2}$
Dundee, ... ..	30	40	26	30	15	21	64	70	81 $\frac{1}{2}$	64
Lightburn, ... ..	36	45	...	...	18	24	66	65 $\frac{1}{2}$	84	70 $\frac{1}{2}$
Motherwell, ... ..	35	45	30	35	18	24	65 $\frac{1}{2}$	75 $\frac{1}{2}$	84	75 $\frac{1}{2}$
<b>Average,</b>	<b>34 10/-</b>	<b>44 3/4</b>	<b>26 16/</b>	<b>31 4/-</b>	<b>16 16/8</b>	<b>22 3/4</b>	<b>65</b>	<b>71</b>	<b>81</b>	<b>71<math>\frac{1}{2}</math></b>
<b>ENGLAND—Fever Hospitals—</b>										
Liverpool, ... ..	35	40	25	30	16	20	75	75	84	75
Birmingham, ... ..	34	40	24	30	15	20	57 $\frac{1}{2}$	68	84	64
Manchester, ... ..	34	40	25	30	15	20	60	81	75	81
Metropolitan,* ... ..	38	44	26	34	18	20	74	79	79	79
<b>Average,</b>	<b>35 5/-</b>	<b>41</b>	<b>25</b>	<b>31</b>	<b>16</b>	<b>20</b>	<b>66<math>\frac{1}{2}</math></b>	<b>76</b>	<b>80<math>\frac{1}{2}</math></b>	<b>75</b>

\* In Royal Infirmary, Nurses' Salaries range from £12 in 1st year to £40 in 7th year.

† In Metropolitan Hospitals the salaries of Staff Nurses, with Fever Training, range from £26 to £32, and with General Training, from £30 to £34.

The question of qualification for entry has not been considered because, although there is a uniform standard set by the Local Government Board for all Poor Law and Fever Hospitals, the general hospitals have varying methods and in some, certain fees must be paid for a preliminary course of instruction before entering on training.

A. K. CHALMERS,  
Medical Officer of Health.

Sanitary Chambers,  
Glasgow, March, 1913.



(b) *Reception-Houses*.—During the year, 222 contacts with infectious disease were accommodated in the Reception-houses, the details being shown in the following Table:—

Diseases.	Baird Street.		South York Street.		Total.	
	Persons.	Days.	Persons.	Days.	Persons.	Days.
Smallpox, ... ..	...	...	1	18	1	18
Typhus Fever, ... ..	41	1,171	106	1,748	147	2,919
Enteric „ ... ..	2	36	33	568	35	604
Scarlet „ ... ..	1	13	...	...	1	13
Diphtheria, ... ..	4	42	...	...	4	42
Chickenpox, ... ..	...	...	10	136	10	136
Measles, ... ..	3	45	10	117	13	162
Whooping-cough, ... ..	3	13	...	...	3	13
Others, ... ..	1	10	7	52	8	62
Total, ... ..	55	1,330	167	2,639	222	3,969

#### REMOVALS BY PUBLIC CONVEYANCE OF PERSONS DEAD OF INFECTIOUS DISEASE.

Thirteen permits were granted under the Glasgow Police (Amendment) Act, 1890, Section II., for the removal of the bodies of persons who had died from infectious disease. In each case the precautionary measures were adopted of requiring the body to be inclosed in a zinc shell, and the coffin to be sprayed with formaline.

#### INTERMENTS IN INTRAMURAL BURYING-GROUNDS.

In accordance with the recommendation of the Corporation suspending the resolution of the Police Commissioners, of date 10th July, 1876, to permanently close the intramural burying-grounds as places of sepulchre, 7 permits were granted, 4 of which were for the High Church Burying Ground, and one each for the Gorbals and North Street.

#### FRESH-AIR FORTNIGHT, EASTPARK COTTAGE HOME, AND T.S. "EMPRESS."

During the year the lists of children selected for admission to the Homes in connection with the Glasgow United Evangelistic Association were submitted by the convener of that organisation for inspection, and those children residing in tenements found to be infected were refused for the time being.

The homes of all children admitted to Eastpark Cottage Homes for Infirm Children were also visited and reported on, as were also the homes of boys belonging to Glasgow granted leave of absence from the training ship "Empress."

## SECTION III.

### GLASGOW PORT LOCAL AUTHORITY.

#### SUMMARY OF WORK DURING 1912.

1,896 vessels from foreign parts passed the Boarding Station at Greenock for the Customs Port of Glasgow during the year 1912. This represents an average of 5 vessels per watch of twenty-four hours. The greatest number of vessels boarded in any single watch was 14.

Of these vessels, 394 had called during the voyage at foreign ports which were infected within the meaning of the Cholera Order.

Table A shows the vessels classified under the following groups:—

Group "A" shows the *arrivals from foreign*, as understood by the officers of H.M. Customs.

Group "B" includes all vessels trading with *infected ports*, and reaching the Clyde direct or through home ports, but with foreign cargo on board.

Group "C" includes vessels from infected ports reaching the Clyde *light* or with outgoing cargo on board.

Group "D" includes vessels from foreign non-infected ports reaching the Clyde direct or coastwise.

Vessels included under Groups "B" and "C" totalled, during the year, 394, all of which were boarded under Article 8 of the Cholera Order; while the 1,502 vessels in Group "D" were from non-infected ports, and were boarded in order to ascertain whether infectious disease existed on board.

The Table shows further the number of arrivals in each month of the year in the several groups, as also the number of crews and passengers.

TABLE A.—NUMBER OF SHIPS ARRIVING FROM FOREIGN PORTS—YEAR 1912.

MONTH.	(A) H.M. Customs.	FROM INFECTED PORTS.						Total of B and C.			(D) From Non- Infected Ports (with or without Cargo).			TOTAL.		
		(B) With Foreign Cargo.			(C) Light or with Outward Cargo.											
		Ships	Crew.	Pass.	Ships	Crew.	Pass.	Ships	Crew.	Pass.	Ships	Crew.	Pass.	Ships	Crew.	Pass.
January,	88	11	895	4	12	608	1	23	1,503	5	103	3,692	1,131	126	5,195	1,136
February,	65	14	957	1	17	978	1	31	1,935	2	73	3,911	961	104	5,846	963
March, -	91	13	897	1	14	759	2	27	1,656	3	88	2,962	579	115	4,618	582
April, -	96	18	1,411	12	16	894	7	34	2,305	19	116	5,036	1,903	150	7,341	1,922
May, -	116	11	838	4	22	1,336	9	33	2,174	13	135	5,568	2,282	168	7,742	2,295
June, -	123	17	1,261	4	10	640	5	27	1,901	9	147	6,792	4,360	174	8,693	4,369
July, -	123	25	1,220	11	20	1,134	22	45	2,354	33	147	6,395	4,599	192	8,749	4,632
August, -	118	19	1,274	15	24	1,429	9	43	2,703	24	141	5,645	2,770	184	8,348	2,794
September,	124	18	1,431	6	12	820	2	30	2,251	8	145	6,620	2,626	175	8,871	2,634
October, -	123	17	1,273	3	17	934	8	34	2,207	11	141	5,996	2,210	175	8,203	2,221
November,	107	11	860	1	23	1,438	1	34	2,298	2	126	5,503	3,240	160	7,801	3,242
December,	122	16	1,205	2	17	816	4	33	2,021	6	140	5,675	4,258	173	7,696	4,264
TOTAL,	1,296	190	13,522	64	204	11,786	71	394	25,308	135	1,502	63,795	30,919	1,896	89,103	31,054

The following comparison is of interest as showing the yearly number of persons forming the crews and passengers:—

Year.	Ships.	Crews.	Passengers.	Registered Tonnage of Vessels Boarded.
1905, ...	2,010	75,468	13,156	3,365,302
1906, ...	2,063	79,773	17,822	3,562,703
1907, ...	1,997	80,212	21,744	3,661,807
1908, ...	2,096	81,050	22,917	3,814,630
1909, ...	2,081	82,037	16,826	3,908,700
1910, ...	2,183	88,013	16,683	3,940,291
1911, ...	2,167	91,727	27,564	3,997,318
1912, ...	1,896	89,103	31,054	3,900,296

In Table B particulars are given as to the nationality of the 1,896 ships shown in Table A and their crews.

On 1,492 British vessels there were 61,103 seamen of British nationality, with a proportion of European seamen, and 19,567 seamen of mixed nationality, mostly Asiatics.

On board the 404 vessels of foreign nationality were 8,333 foreign seamen.

TABLE B.—NATIONALITY OF SHIPS AND THEIR CREWS, 1912.

Nationality.	Ships.	Crews.
British, ... ..	1,492	61,103
Natives of India, ... ..	(On British Ships),	16,517
Chinese, ... ..	do.,	2,975
Malays, ... ..	do.,	18
Arabs, ... ..	do.,	42
West Africans, ... ..	do.,	10
Japanese, ... ..	do.,	5
Norwegians, ... ..	210	3,852
Swedish, ... ..	33	624
Spanish, ... ..	66	1,662
French, ... ..	20	474
German, ... ..	22	371
Austro-Hungarian, ... ..	11	363
Italian, ... ..	8	235
Russian, ... ..	4	146
Greek, ... ..	7	197
Danish, ... ..	14	255
Dutch, ... ..	6	137
Argentine, ... ..	1	98
Belgian, ... ..	2	19
Totals, ... ..	1,896	89,103

Table C shows the arrivals of Table A, grouped according to whether they arrive direct from foreign or coastwise, their nationality, registered tonnage, and motive power.

Vessels coming coastwise are usually in water-ballast or partly loaded with outgoing cargo, occasionally also with part inward cargo.

TABLE C.—NUMBER, CLASS, AND TONNAGE OF VESSELS BOARDED AT TAIL OF THE BANK, 1912.

Voyage.	Nationality.	Class.	No. of Vessels.	Registered Tonnage.
Direct, ... ..	{ British, ... ..	{ Steam, ... ..	775	1,723,291
		{ Sailing, ... ..	4	607
	{ Foreign, ... ..	{ Steam, ... ..	205	225,338
		{ Sailing, ... ..	22	33,316
Coastwise, ... ..	{ British, ... ..	{ Steam, ... ..	705	1,772,552
		{ Sailing, ... ..	2	1,275
	{ Foreign, ... ..	{ Steam, ... ..	181	142,013
		{ Sailing, ... ..	2	1,904
			1,896	3,900,296

Dr. Wilson adds the following notes:—

#### DISEASES ON CLYDE-BOUND VESSELS.

The number of vessels which arrived at the Tail of the Bank bound for Glasgow, as already stated, were fewer than in any year since 1907. The diseases noted by the Boarding Medical Officers, and dealt with by the Glasgow staff, numbered 96 in 1912, as compared with 108 in 1911.



Table D shows the nature and distribution of the diseases met with in 1912. The first column shows the totals, and the others the destination, whether hospital or home, of those found on arrival.

35 cases were removed to Belvidere or Ruchill Hospital, 39 were sent to their homes with special precautions. 11 deaths occurred, of which 5, (all phthisis) were buried at sea, and 1 (enteric) died at the Tail of the Bank and was removed by special ambulance to Belvidere mortuary. Of the remainder, 4 died from beri-beri and one from tetanus.

All the 4 cases of beri-beri found on arrival were sent to the Western or Victoria Infirmaries.

To complete the numbers on Table D, column three shows that 20 cases were dealt with in other ports on the homeward voyage. No returns are available concerning these cases, but disinfection of the vessels was carried out in Glasgow when necessary.

TABLE D.—RETURN OF INFECTIOUS DISEASES ON BOARD SHIPS BOUND FOR  
THE PORT OF GLASGOW DURING THE YEAR 1912.

Diseases.	Total Number of Cases.	Cases Found on Arrival.	Cases Dealt with in other Ports.	Cases Sent to Hospital in Glasgow.	Cases Sent Home.	Deaths.
Cholera, ... ..	...	...	...	...	...	...
Plague, ... ..	...	...	...	...	...	...
Smallpox, ... ..	2	...	2	...	...	...
Enteric Fever, ... ..	8	5	3	4	1	1
Measles, ... ..	12	12	...	9	3	...
Chicken-pox, ... ..	2	2	...	2	...	...
Scarlet Fever, ... ..	3	3	...	3	...	...
Diphtheria, ... ..	1	1	...	1	...	...
Erysipelas, ... ..	3	3	...	2	1	...
Phthisis, ... ..	30	22	8	...	22	5
Trachoma, ... ..	6	6	...	...	6	...
Dysentery, ... ..	...	...	...	...	...	...
Diarrhœa, with temp., ... ..	3	3	...	1	2	...
Pneumonia, ... ..	10	8	2	6	2	...
Glandular Swelling or Abscesses, ... ..	...	...	...	...	...	...
Parotitis, ... ..	...	...	...	...	...	...
{Observation, or {Surveillance, ... ..	2 1	2 1	...	1 ...	1 1	...
Beri-beri, ... ..	9	4	5	4	...	4
Pertussis, ... ..	1	1	...	1	...	...
Tetanus, ... ..	1	...	1	...	...	1
Tonsilitis, ... ..	1	1	...	1	...	...
Anthrax, ... ..	1	...	1	...	...	...
Totals, ... ..	96	74	22	35	39	11
		...				
		...				

### CHOLERA AND PLAGUE.

No case of cholera or plague came within notice at the Tail of the Bank during 1912.

We were informed by Local Government Board circulars, by the weekly issue of the United States Public Health Service, and by the press, of the occurrence in epidemic form of diseases coming under the Cholera Order.

Cholera appeared in epidemic form in Constantinople and Alexandretta during the later months of 1912. Plague was reported epidemic in the Azores (Terceira Island) during October. A single case of plague occurred in Liverpool in August, and another occurred in the Tyne Port Sanitary District in

September. The latter was found on the s.s. "Bellailsa," a vessel which had been on a voyage from Rosario to Hamburg and to Tyne through a number of foreign ports. This vessel also landed a case in Hamburg on September 2nd, and another at Cuxhaven on September 8th.

The three cases were found in the ship's apprentices, of which I am informed two died.

Every precaution was taken on all vessels arriving from, or which had touched at, infected ports.

#### SMALLPOX.

Smallpox was prevalent in Spanish and Portuguese ports, *e.g.*, Bilbao, Valencia, Lisbon, and Huelva, &c., during December, 1912.

Special precautions, *e.g.*, mustering all crews on vessels from infected ports, were carried out on their arrival at the Tail of the Bank. No case of smallpox was noted during 1912.

#### PHTHISIS.

Thirty cases of pulmonary tuberculosis were noted during the year, as compared with 25 in 1911, and 19 in 1910. Whereas each of the other diseases shows a slight decrease, phthisis shows a continuous and steady increase. The 30 cases for 1912 may be distributed as follows:—deports and rejects, 6; ordinary passengers, 18; and members of crews, 6. Of the 30 cases, 5 died and were buried at sea.

Of the 6 deports and rejects, 4 were British deports, one was a British reject, and one an alien deport.

Of the ordinary passengers, 12 were British and 6 alien. Of the members of crews, 5 were British, and 1 was a native of India.

Twenty-two cases were found on board on arrival at the Tail of the Bank, and 8 were dealt with elsewhere. Of the latter (8), 5 died and were buried at sea—2 British and 3 alien; the remainder 3 British male passengers were landed at Moville. Disinfection of the vessel was afterwards carried out in Glasgow.

This increase of 5 cases over those of 1911 is found in the group "Ordinary passengers." In this group, 12 were British and 6 alien. Of the 6 deports, 1 only was alien, and of the 6 members of crews, 5 were British and 1 a native of India.

## PHTHISIS.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912				
Jan. 22	S.S. "Athenia"	St. John	1	Deported steerage passenger, proceeding home to Aberdeen; Medical officer advised and ship's hospital disinfected.
Feb. 22	Barque "Montcalm"	Poro (New Caledonia)	1	Proceeding home to France, quarters disinfected.
Mar. 31	S.S. "California"	New York	1	An alien deport returning to Finland. Ship's hospital and bedding disinfected.
April 26	S.S. "Anchoria"	Calcutta	1	Quartermaster (native), sent to Western Infirmary, Glasgow. Ship disinfected.
May 27	S.S. "Letitia"	Montreal	1	Patient an alien steerage passenger. Proceeding to Russia, disinfection carried out.
June 16	S.S. "Hesperian"	"	2	An Iclander, 2nd class passenger, and a Servian, 3rd class passenger. Both died and were buried at sea.
" 16	"	"	1	A distressed seaman (Consular passenger). Going home to 77 Buchanan Street, Glasgow.
" 24	S.S. "Scandinavian"	"	1	Lady, 2nd class passenger. Two years in Canada. Returning home to Saltcoats.
July 8	S.S. "Mongolian"	Philadelphia	1	Proceeded to 115 Blackburn Street, Plantation, Glasgow.
" 14	S.S. "Hesperian"	Montreal	1	Proceeding to Fyvie, Aberdeen. Medical Officer of Health advised.
Aug. 11	"	"	1	Proceeding home to Beaulieu. Ship's hospital disinfected. Medical Officer of Health advised.
" 22	S.S. "Mongolian"	Philadelphia	1	Proceeding home to Govan. Ship's hospital disinfected. Medical Officer of Health advised.
" 28	S.S. "Grampian"	Montreal	1	Deported male passenger, going home to Brora. Ship's hospital disinfected. Medical Officer of Health advised.
Sept. 8	S.S. "Columbia"	New York	4	Three steerage passengers disembarked at Merville, and one 2nd cabin passenger going to Holytown. All four males isolated in ship's hospital. Disinfection carried out.
Oct. 6	S.S. "Hesperian"	Montreal	3	One male deport returning to Glasgow. Two steerage male passengers, one going to Lochmaddy, N. Uist, and the other to Dunfermline. Medical Officers of Health advised. Disinfection carried out.
" 11	S.S. "Mongolian"	Philadelphia	2	One a Consular passenger going to Edinburgh. Medical Officer of Health advised. The other a steward going home to Glasgow. Disinfection carried out.
" 12	S.S. "Scandinavian"	Montreal	1	Deported male passenger. Died 10th October, 1912, buried at sea. Effects were still on board and were disinfected in Glasgow.
" 30	S.S. "Serula"	Antwerp	1	A seaman, aged 58 years, excessive hæmorrhage. All discharges disinfected. Patient removed to Merryflats Hospital. Quarters disinfected in Glasgow.
Carry forward,			25	



## PHTHISIS.—Continued.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912	<i>Brought forward,</i>		25	
Nov. 3	S.S. "Hesperian"	Montreal	1	2nd class passenger, age 33 years. Outward on 12th October. Rejected and returned by same vessel. Address, Gervaise Wood, Mains, Lanark.
,, 27	S.S. "Cassandra"	,,	1	Alien, steerage female passenger, age 22 years. Died suddenly on November 25th, and was buried at sea. Disinfection of quarters and clothing carried out.
Dec. 4	S.S. "Athenia"	,,	2	Two steerage male passengers. One Scotch, age 18 years, address, Elgin, died 26th November, and was buried at sea; the other, an Alien, steerage passenger, age 20 years, on his way home to Austria. Disinfection of clothing and quarters carried out in Glasgow.
,, 6	S.S. "Achilles"	Nantes	1	An A.B., aged 58 years, had been treated in Nantes, improving. Proceeding home to Glasgow. Quarters disinfected at Glasgow.
			30	

## MEASLES.

Twelve cases of measles were noted, as compared with 2 cases in 1911. 9 of these were sent to Belvidere Hospital for treatment, and 3 were nursed at their homes, whither they were conveyed with the usual precautions.

The cases were sporadic, except in the instance of the s.s. "Hesperian," where a slight hold obtained in the seaman's forecabin. 5 sailors sickened and were isolated on board. All the 5 cases were removed to Belvidere Hospital.

## MEASLES.

Date.	Name of Vessel.	Where from	No. of Cases.	Remarks.
1912				
April 4	S.S. "Behera"	Bilbao	1	A sailor, aged 29 years. Nursed at home in Glasgow. Ship's quarters and patient's clothing disinfected at Glasgow.
,, 29	S.S. "California"	New York	1	Alien steerage passenger, aged 3 years. Isolated in ship's hospital. Sent to Belvidere Hospital. Disinfection carried out.
June 2	S.S. "Grampian"	Montreal	2	Two children, steerage passengers. Isolated in ship's hospital. Removed to Belvidere. Disinfection carried out.
,, 12	S.S. "Cassandra"	,,	1	An apprentice. Isolated in his own quarters. Convalescent. Disinfection done at Glasgow.
,, 16	S.S. "Hesperian"	,,	5	Five seamen, isolated on board, and sent to Belvidere. Disinfection carried out.
,, 27	S.S. "Baron Kelvin"	Lisbon and Huelva	1	An ordinary seaman, recovered. Ship disinfected at Glasgow.
Dec. 19	S.S. "Numidian"	Boston	1	Cabin passenger, a girl aged 12. Isolated in ship's hospital, and removed to Belvidere. Disinfection carried out.
			12	

## BERI-BERI.

Nine cases of Beri-Beri were reported during 1912, and the same number was noted in 1911.

The crew of the ship Vance suffered from a severe epidemic on a voyage from Poro, New Caledonia. She put into Bahia, where all on board were treated for beri-beri. Four deaths occurred during the course of the voyage.

The other cases were sporadic, and of the 4 found on arrival at the Tail of the Bank, 3 were natives of India and were sent, 2 to Belvidere Hospital, and 1 to the Western Infirmary. The fourth case, a Frenchman, and second officer of the barque Gerveur, was removed to Ruchill Hospital.

## BERI-BERI.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912 Jan. 25	S.S. "Clan Stuart"	Port Pirie	1	Lascar (sailor) one of a new crew which has shown cases of Beri-beri. Removed to Belvidere. Disinfection carried out.
, 30	S.S. "Dalhanna"	Calcutta	1	Native fireman, removed to hospital, Hull.
April 13	S.S. "Tenasserim"	Rangoon	1	Native fireman, removed to Belvidere. Ship disinfected.
, 22	S.S. "Clan Macallister"	Akyats	1	A Lascar, removed to Western District Hospital.
June 6	Barge "Gerveur"	New Caledonia	1	Second officer of vessel, removed to Ruchill. Ship disinfected.
Sept. 30	Ship "Vance"	Poro, New Caledonia	4	Four members of crew. Died during course of voyage. Ship put into Bahia where all on board had to receive treatment for Beri-beri.
			9	

## TRACHOMA.

The decrease in the numbers of emigrants rejected in America on account of Trachoma continues yearly. 21 cases were rejected in 1910, 8 in 1911, and 6 in the present year, 1912. As we are probably approaching the minimum number of cases, the yearly decrease may now be slower.

Of the 6 cases mentioned above, 4 were aliens returning to their own countries in charge of the Shipping Company in whose vessels they had sailed. Of the remaining 2, one was a rejected British steerage passenger, and the other an alien travelling second class returning to Glasgow, whence he had emigrated.

## TRACHOMA.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912 Oct. 6	S.S. "Hesperian"	Montreal	1	A rejected male passenger, returning to Glasgow (British).
, 11	S.S. "Mongolian"	Philadelphia	1	A rejected male transmigrant, returning to his home in Syria.
Nov. 4	S.S. "Carthaginian"	,,	1	A rejected male transmigrant, going home to Assyria.
	Carry forward,		3	

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912	<i>Brought forward,</i>		3	
Dec. 9	S.S. "California"	New York	1	A rejected transmigrant (Russian Pole). Isolated in hospital on board. Going to his home in Liban.
Nov. 16	S.S. "Saturnia"	Montreal	1	A rejected alien second class passenger. Isolated in ship's hospital, returning to Glasgow (a Pole).
Dec. 21	S.S. "Carthaginian"	Philadelphia	1	A rejected male transmigrant, case slight, returning to his home in Russia.
			<u>6</u>	

#### ENTERIC FEVER.

Eight cases were noted in 1912, as compared with 10 cases in 1911.

Of the 5 cases found on vessels at the Tail of the Bank, 3 were removed to Belvidere Hospital, one was sent to his home in Glasgow, and the body of the fifth, who died at the Tail of the Bank, was removed to Belvidere mortuary.

The case sent to his home in Glasgow had been the attendant on the fatal case. He was sent home for observation and treatment, and proved to have contracted enteric fever.

The other 3 cases of the 8 mentioned were dealt with in other ports on the voyage home. One was landed at Las Palmas, one at Liverpool, and one at Gravesend, the last being a native of India.

#### ENTERIC FEVER.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912				
Feb. 11	S.S. "Orcadian"	Buenos Ayres	2	One died at the Tail of the Bank. Body removed to Belvidere Hospital. Ship's quarters and patient's clothing disinfected. The other one was kept under observation at home. Widal test positive.
Apr. 26	S.S. "Anchoria"	Calcutta	1	Ship's barber (native), landed at Gravesend on April 12th. Vessel disinfected there.
June 10	S.S. "Raeburn"	Buenos Ayres	1	Second steward, sickened 11th May. Isolated on board and removed to Hospital at Liverpool. Ship disinfected by Port Local Authority there.
" 29	S.S. "Cameronia"	New York	1	A trimmer, sickened June 22nd. Isolated in ship's hospital. Removed to Belvidere Hospital.
Aug. 25	S.S. "Cameronia"	New York	1	A 2nd class passenger, removed to Belvidere Hospital. Ship's quarters disinfected.
Oct. 4	S.S. "Ontarian"	Buenos Ayres	1	Fourth engineer, landed at Las Palmas on 20th September. Isolated on board up to date of landing. Sulphur fumigation carried out by ship's officer. Crew list forwarded to Glasgow office.
Dec. 23	S.S. "Gisla"	Barcelona	1	A fireman, removed to Belvidere Hospital. Disinfection carried out in Glasgow.
			<u>8</u>	



## PNEUMONIA.

Ten cases of pneumonia were noted during 1912. Eight of these were found on arrival, and two were dealt with elsewhere.

Of the former, 6 were British members of crews, one a native of India, and one second-class passenger. 6 of these were removed to the Western Infirmary for treatment, and 2 were sent to their homes in Glasgow.

The 2 cases dealt with in other ports were both Lascars (sailors). One was landed and sent to hospital in Ardrossan, the other was similarly dealt with in Newport (Mon.).

## PNEUMONIA.

Date.	Name of Vessel.	Where from.	No. of Cases.	Remarks.
1912				
Feb. 24	S.S. "Clan Macdonald"	Chittagong	1	A Lascar, landed at Ardrossan, and sent to Hospital there.
Mar. 16	S.S. "Bakio"	Sagunto	1	Fireman. Removed to Western Infirmary, Glasgow.
June 16	S.S. "Turkestan"	Bombay	1	Fireman. Removed to Western Infirmary, Glasgow.
July 14	S.S. "City of Chester"	Vizagapatam	1	A Lascar. Removed to Hospital at Newport, 8th July, 1912.
Sept. 7	S.S. "City of York"	Bombay	1	A coaltrimmer. Removed to Western Infirmary, Glasgow.
,, 30	S.S. "Cassandra"	Montreal	1	A second-class passenger, going home to Glasgow.
Oct. 21	S.S. "Montgomeryshire"	Calcutta	1	Native cook. Removed to Western Infirmary, Glasgow.
Nov. 28	S.S. "Pretorian"	Montreal	1	A steward. Isolated on board, and sent to his home in Glasgow.
Dec. 14	S.S. "Cameronia"	New York	1	A stowaway. Sent to Western Infirmary, Glasgow.
,, 15	S.S. "Victoria"	Bilbao	1	A fireman. Removed to Western Infirmary, Glasgow.
			10	

## SANITARY CONDITION OF SHIPS.

Table E shows the numbers and nationalities of vessels, steam and sailing, on which defects have been found during the year. The total numbers of vessels here shown for 1912 are 257 steam and 14 sailing, as compared with 378 steam and 16 sailing in 1911. This fall is greatest in British vessels, the foreign remaining proportionately as in last year.

TABLE E.—NUMBER AND NATIONALITY OF VESSELS IN WHICH DEFECTS WERE FOUND DURING THE YEAR 1912.

Nationality.	DEFECTS FOUND ON—	
	Steam.	Sailing.
British, ... ..	185	3
Norwegian, ... ..	44	2
Spanish, ... ..	12	...
Austrian, ... ..	2	...
Swedish, ... ..	4	...
Danish, ... ..	4	...
French, ... ..	1	5
German, ... ..	1	1
Italian, ... ..	2	2
Russian, ... ..	1	1
Greek, ... ..	1	...
Total, ... ..	257	14

Table F shows the Defects Found classified as (*a*) structural, (*b*) due to repairs required, and (*c*) to neglect, *i.e.*, to filth nuisances.

(*a*) and (*b*) are practically the same in numbers as in 1911, but (*c*), the neglect or filth nuisances, number 259 in 1912, as compared with 412 in 1911—a reduction of 153 for the year. This is probably due—apart from the fact of the fewer arrivals—to experienced inspection, and to the evident desire of ships' officers to push the sailors and firemen to greater cleanliness of their forecastles and water-closets. The forecastles account for 40 nuisances less, and the water-closets for 31 less than in 1911.

Table F under the heading Accumulation of Manure records the number of cattle ships arriving at the Tail of the Bank. Under this head during 1912 only 2 arrivals are thus recorded, as compared with 22 in 1911 and 55 in 1910, showing that the importation of cattle to Glasgow has almost ceased.

TABLE F.—STRUCTURAL DEFECTS OR NUISANCES FOUND ON VESSELS (BRITISH AND FOREIGN), YEAR 1912.

(a) DUE TO STRUCTURAL DEFECTS.		(b) TO REPAIRS REQUIRED.		(c) TO NEGLECT.	
Nature and Site.		Nature and Site.		Nature and Site.	
<i>Forecasts.</i>		<i>Forecasts.</i>		<i>Forecasts.</i>	
Insufficient heating, ...	1	Bogies broken, ...	13	Floors and woodwork dirty, ...	83
Do. lighting, ...	2	Ports broken and leaking, ...	34	Ship's gear stored in bunks, ...	2
Do. ventilation, ...	3	Steam heater leaking, ...	7	Ventilators plugged, ...	6
Do. sleeping accommodation, ...	4	Overhead deck leaking, ...	43	Scuppers choked, ...	4
Do. seating do., ...	...	Doors off food lockers, ...	3	Repainting or lime-washing required, ...	20
Anchor chains uncovered, ...	1	Floors broken, ...	2	Vermineous, ...	1
Scuppers too high, ...	...	Bunks broken, ...	1	Food stored in bunks and forecastles, ...	5
No doors on food lockers, ...	...	Ventilators broken, ...	1	Drinking-water barrel in forecastles, ...	5
Danger of fire from bogie, ...	...	Doors on bulkhead broken, ...	4	Do. tanks uncovered, ...	...
Fore-peak not partitioned off, ...	1	Forecastle door broken, ...	1	Rat infested, ...	...
		Anchor chain casing broken, ...	1	Bilges unclean, ...	...
				Pantry and storeroom dirty, ...	...
				Fore-peak smelling, ...	...
<i>Water-closets.</i>		<i>Water-closets.</i>		<i>Water-closets.</i>	
Insufficient accommodation, ...	2	Seats broken, ...	4	Pan or trough choked or foul, ...	75
		Ports broken, ...	1	Ship's gear stored therein, ...	11
		Trough or pan broken, ...	3	Gear stored in bathroom, ...	1
		Flush tank broken, ...	...	Scuppers choked, ...	7
		Floor broken, ...	1	Lime-washing or repainting required, ...	2
		Doors off or broken, ...	2	W.C. Urinal choked, ...	1
		Plug broken, ...	...		
		Effluent leaking, ...	...		
		Bathroom basin broken, ...	...		
<i>Decks.</i>		<i>Decks.</i>		<i>Decks.</i>	
		Drinking-water tank leaking, ...	1	Accumulation of manure, ...	2
				Do. rubbish, ...	12
				Galley dirty, ...	4
				Drinking-water tanks uncleansed, ...	10
				Bilges uncleaned, ...	1
				Bathroom dirty, ...	4
				Do. scuppers choked, ...	2
				Do. food stored therein, ...	1
Total, ...	14		122		259



TABLE G—INSPECTION OF SHIPS.

	1907.		1908.		1909.		1910.		1911.		1912.	
	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.
(a) Carefully inspected,	893	27	544	15	555	12	509	22	558	12	768	22
(b) Partially inspected,	1,003	20	1,470	22	1,433	26	1,571	31	1,511	26	1,059	8
(c) { Boarded but not inspected,	12	...	16	...	26	1	22	...	...	...	16	...
{ Hailed do.,	18	...	6	...	4	...	9	...	25	1	17	...
(d) Not boarded nor hailed, ...	24	...	23	...	21	3	19	...	34	...	6	...
	1,950	47	2,059	37	2,039	42	2,130	53	2,128	39	1,866	30
	47		37		42		53		39		30	
Total, ...	1,997		2,096		2,081		2,183		2,167		1,896	

The above Table of Inspection of Vessels gives the proportions and relative numbers inspected "carefully," "partially," &c., as compared with previous years. The manner and completeness of inspection must vary with the tide, and time available, also occasionally on account of the weather. The numbers, however, show a considerable evenness in their yearly occurrence.

#### POWER OF BOARDING VESSELS BY PORT LOCAL AUTHORITIES.

Reference has already been made on page 27 to the difficulty of thorough examination of crews and passengers at the Tail of the Bank, owing to the short time it takes vessels, after passing the Boarding Station at Greenock to enter the channel, when they must proceed up the river. If another vessel should be following on there is little time for inspection.

At the request of the Port Local Authority I prepared a Report on the power of Boarding Vessels, which was subsequently submitted to a meeting of the Port Local Authorities Association, and forms Appendix V.

The following statement, showing the cost of the Port Local Authority for the year ended 31st May, 1913, is taken from the Annual Abstract of Expenditure and Revenue prepared by the Treasurer:—

## EXPENDITURE.

## BOARDING STATION AT PRINCES PIER, GREENOCK—

Salary to Senior Assistant to Medical Officer, ... ..	£330 0 0	
Salary to Junior Assistant to Medical Officer, ... ..	285 0 0	
Fees (£35 11s.) and Expenses (£25 16s.) of <i>locum tenens</i> during holidays of Medical Assistants, ... ..	61 7 0	
Wages to Inspectors (two) of Ships and Crews, ... ..	209 0 0	
Insurance of Employees under Workmen's Compensation Acts, ... ..	1 5 6	
National Insurance Act—Employers' Contributions (Health), ... ..	1 10 6	
Wages (£29 11s.), Board and Lodging Allowance (£8 17s. 3d.) to Inspectors relieving for holidays and sickness, and Lodging Allowance to Painters (£3), ...	41 8 3	
Cost of Removals consequent on changes in Inspector's Staff, ... ..	10 10 6	
Uniform Clothing for Medical Assistants (£9 8s.) and Inspectors (£14 0s. 11d.), ...	23 8 11	
Clyde Pilot Board—Contribution towards Upkeep of Steam Launch, ... ..	450 0 0	
Rent of Site for Boarding Station, ... ..	10 0 0	
Assessments and Insurance (Fire), ... ..	12 11 9	
Heating (£11 4s. 2d.) and Lighting (£5 1s. 9d.), ... ..	16 5 11	
Furnishings, Fittings, &c., ... ..	21 13 8	
Repairs to Boarding Station, ... ..	14 3 7	
Office Cleaner's Wages, ... ..	23 8 0	
		£1,511 13 7

## GLASGOW HARBOUR—

Wages to Inspectors (two) of Ships and Crews, ... ..	£258 17 0	
Wages to Inspectors appointed under Public Health (Regulations as to Food) Act, 1907, ... ..	174 0 4	
Insurance of Employees under Workmen's Compensation Acts, ... ..	1 4 9	
National Insurance Act—Employers' Contributions (Health), ... ..	1 16 3	
Uniform Clothing for Inspectors, ... ..	9 13 0	
Disinfectants, Bait, &c., ... ..	2 13 1	
Visits of Medical Officer to 16 Vessels to ascertain nature of cases of illness on board, at 42s., ... ..	33 12 0	
Removal to Epidemic Hospitals and Treatment of 72 Patients, at £8 8s. each (£604 16s.), and Hire of Ambulance (£12 3s.), ... ..	616 19 0	
Maintenance of Contacts in Reception Houses, ... ..	12 7 6	
Interment Charges (eight cases), ... ..	7 2 6	
Bacteriological Examinations at request of Medical Officer, ... ..	16 3 0	
Washing Clothing and Disinfecting Ships (51 at 15s. and 3 at 5s.), ... ..	39 0 0	
		1,173 8 5

## GENERAL AND ADMINISTRATIVE CHARGES—

Salary to Medical Officer of Health, ... ..	£50 0 0	
Do. Sanitary Inspector, ... ..	50 0 0	
Do. Veterinary Surgeon appointed under Public Health (Regulations as to Food) Act, 1907, ... ..	50 0 0	
Do. to Clerk in Office of Medical Officer, ... ..	53 17 1	
National Insurance Act—Employers' Contributions (Health), ... ..	0 11 6	
Office of Sanitary Inspector (Proportion of Expense), ... ..	16 1 6	
Office of Clerk to Local Authority Do., ... ..	30 0 0	
Office of Treasurer, Do., ... ..	30 0 0	
Auditors' Fee, ... ..	10 10 0	
Stationery and Newspapers (£13 17s. 10d.), Printing (£8 14s.), and Advertising Audit (£1 16s. 1d.), ... ..	24 7 11	
Printing Minutes, ... ..	34 6 0	
Telegrams and Postages, ... ..	5 13 10	
Railway and other Travelling Expenses, and Cab Hires, ... ..	33 10 5	
Corporation of Glasgow, Tramways Department—Tram-Car Checks, ... ..	6 6 0	
Expenses of Deputations attending in London Meetings of the Association of Port Sanitary Authorities, ... ..	22 1 0	
Annual Subscription to Association of Port Sanitary Authorities, ... ..	3 3 0	
Corporation of Greenock, Public Health Department—Payment for year in respect of which 6 beds are reserved in Craigieknowes Hospital for the accommodation of Patients, ... ..	72 0 0	
Corporation of Glasgow, Chemical Department—Fees for analyses, ... ..	6 6 0	
Telephonic Communication—		
Post Office Telephone Service—Exchange and Private Lines, ... ..	£20 15 0	
Do. Trunk Dues, ... ..	6 14 0	
	27 9 0	
Sundry Petty Charges, ... ..	7 11 5	533 14 8
	£3,218 16 8	£3,218 16 8

## REVENUE.

Proportion apportioning to the Port Local Authority of the Port of Glasgow for the year to 15th May, 1912, of the contribution of £15,000 payable under the Local Taxation (Customs and Excise) Act, 1890, towards the cost of Medical Officers and Sanitary Inspectors in Scotland, ... ..	£28 6 5
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## CONTRIBUTIONS UNDER ARTICLE 6, SECTION IV., OF ORDER—

Local Authority of the Eastern District of the County of Dumbarton, ... ..	10 0 0
Local Authority of the Burgh of Glasgow for balance of Expenditure, ... ..	3,180 10 3
	£3,218 16 8

## FOREIGN MEAT REGULATIONS.

The following Table gives the total quantities of food material landed in the Port of Glasgow during the year 1912, a percentage of which was examined under the Foreign Meat Regulations:—

<i>Beef.</i>				<i>Pork.</i>			
Quarters, ... ..	15,219			Mess, ... ..	2,520 barrels.		
Rumps, ... ..	1,247 tierces.			" ... ..	75 tierces.		
Mess, ... ..	2,704 "						
" ... ..	39 barrels.						
Boneless, ... ..	9,788 boxes.						
" ... ..	21,109 bags.						
" ... ..	1,250 cuts.						
<i>Veal.</i>				<i>Sundries.</i>			
Carcases, ... ..	132			Sheep and Lamb Hearts,	20 bags or boxes.		
Sides, ... ..	24			Ox Hearts, ... ..	94 "		
				Ox Cheeks, ... ..	70 "		
				Ox Tails, ... ..	12 "		
				Pig Skins, ... ..	25 "		
				Poulton, ... ..	2,844 "		
				Kidneys, ... ..	4 "		
				Sausage Skins,	28 barrels.		
<i>Mutton.</i>							
Carcases, ... ..	58,108						
Cuts, ... ..	135 bags.						
" ... ..	38 boxes.						
<i>Destroyed.</i>							
Beef (boneless), ... ..							1 box.
Beef, ... ..							9 bags.
Mess Beef, ... ..							8 barrels.

## UNSOUND FOOD REGULATIONS.

The following Table shows the amount of food stuffs inspected during the year, and the amount destroyed:—

MEAT—				No. of Packages.	Tons.	Cwts.	Qrs.	Lbs.	Examined.
Fresh and frozen, ... ..	3,351			64	8	3	4		General.
Preserved, ... ..	52,034			2,428	18	3	7		231
Sundries, ... ..	520			34	1	1	8		21
FRUIT—									
Fresh, ... ..	1,160,285			44,807	12	3	24		480
Preserved—Dried, ... ..	10,979			211	8	3	14		35
Preserved—Tinned and bottled,	41,637			1,155	14	0	20		94
Nuts, ... ..	13,677			808	11	3	6		General.
VEGETABLES—									
Fresh, ... ..	231,757			538	16	0	0		General.
				(535,848 bushels)					
Preserved—Tinned and dried,	113,290			10,469	4	3	16		84
PROVISIONS—									
Meal, flour, &c., ... ..	2,147,096			154,363	16	2	19		General.
Butter, cheese, &c., ... ..	154,844			7,830	1	0	6		629
Bacon, &c., ... ..	80,599			17,173	9	0	1		575
FISH—									
Preserved and tinned, ... ..	5,796			147	17	2	20		36
SUNDRIES, ... ..	5,478			447	6	2	6		40
	4,021,343			240,481	8	2	11		2,225
				(535,848 bushels.)					

## DESTROYED.

6 barrels apples, 84 boxes oranges, 85 tins apricot pulp, 18 cases sauce.



## SECTION IV.

AN ACCOUNT OF THE HOUSE ACCOMMODATION OF THE  
LABOURING CLASSES IN THE BURGH AND OF ANY  
PROCEEDINGS UNDER THE HOUSING OF THE  
WORKING CLASSES ACTS OR OTHERWISE.

## (A) GLASGOW POLICE (AMENDMENT) ACT, 1890, SECTION 32.

No action has been taken under this Section since 1909, so that the summary of houses closed under the Section which appeared in the Report for last year may be repeated.

Representations were made under the Section in each year from 1890 to 1904, and again in 1909, action in the years 1905-1907 and 1910 having been taken under the Housing of the Working Classes Acts.

Altogether 916 houses have been closed under Section 32 of the Local Act, their number, arranged according to size, being as follows:—

1-Apartment,	...	...	...	...	613
2-Apartments,	...	...	...	...	282
3-Apartments,	...	...	...	...	11
4-Apartments and up,	...	...	...	...	10
Total,					916

## (B) HOUSING OF THE WORKING CLASSES ACT, 1890.

All the houses represented under this Act were inspected during the month of June, 1913, and the following Table shows the position of these as on that date:—

SUMMARY OF REPRESENTATIONS UNDER THE HOUSING OF THE  
WORKING CLASSES ACT, 1890.

Year of Representation.	Total Represented.	Buildings Demolished.	Buildings Closed.	Converted into Business Premises.	Repaired.	Failed to obtain Closing Order.	Agreement to Remove not carried out, and still occupied.	Action not taken to a Termination.
1902	3	3	...	...	...	...	...	...
1903	32	22	4	1	1	1	...	3
1904	76	55	3	1	10	...	3	4
1905	100	41	8	7	16	1	2	25
1906	72	21	10	8	20	...	...	13
1907	40	6	8	1	10	...	...	15
	323	148	33	18	57	2	5	60

In the following Table the information contained in the previous summary is shown in relation to the Wards affected:—

WARD SUMMARY OF RESULTS OF REPRESENTATIONS UNDER THE HOUSING OF THE WORKING CLASSES ACT, 1890.

WARD.	Total Represented.	Demolished.	Closed.	Business.	Repaired.	Closing Order Failed.	Agreement not carried out.	Action not taken to a Termination.
1. Dalmarnock, -	11	5	4	...	1	...	...	1
2. Calton, -	62	37	3	1	9	...	1	11
3. Mile-end, -	32	15	5	2	5	...	...	5
4. Whitevale, -	20	10	1	1	5	...	...	3
5. Dennistoun, -	8	1	3	1	2	...	...	1
6. Springburn, -	2	1	1	...	...	...	...	...
7. Cowlares, -	2	...	...	2	...	...	...	...
8. Townhead, -	10	4	1	1	2	...	...	2
9. } Blackfriars, {	10	6	1	...	2	...	1	...
9A } Blackfriars, {	18	8	...	1	3	...	1	5
10. Exchange, -	4	...	1	1	1	...	...	1
11. Blythswood, -	1	...	...	...	1	...	...	...
12. Broomielaw, -	18	13	1	...	1	1	...	2
13. Anderston, -	16	7	1	...	5	1	1	1
14. Sandyford, -	8	4	...	...	1	...	1	2
15. Park, -	1	...	1	...	...	...	...	...
16. Cowcaddens, -	33	13	3	...	5	...	...	12
17. Woodside, -	2	...	1	...	1	...	...	...
18. Hutchesontown, -	4	2	...	...	2	...	...	...
19. Gorbals, -	31	10	1	6	4	...	...	10
20. Kingston, -	23	7	5	2	6	...	...	3
21. Govanhill, -	2	1	...	...	...	...	...	1
22. Langside, -	3	3	...	...	...	...	...	...
25. Maryhill, -	2	1	...	...	1	...	...	...
	323	148	33	18	57	2	5	60

The foregoing statement of the number of tenements dealt with may be restated so as to show the number of houses in them included in the representations referred to:—

HOUSES CLOSED AS UNFIT FOR HUMAN HABITATION UNDER THE HOUSING OF THE WORKING CLASSES ACT, 1890 (1902-1909).

Size.	1 Apartment.	2 Apartments.	3 Apartments.	4 Apartments and Upwards.	Total.
Numbers, -	738	649	24	5	1,416

In addition to the above, certain houses (see Summary at foot of following page) have been closed under the operation of the Amending Act—Housing, Town Planning, &c., Act, 1909—and the numbers affected by the representations lodged thereunder prior to December 31st, 1912, and closed before or shortly after the end of the year are as follows:—

HOUSES CLOSED AS UNFIT FOR HUMAN HABITATION UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909 (1910-1912).

Size.	1 Apartment.	2 Apartments.	3 Apartments.	4 Apartments and Upwards.	Total.
Numbers, -	101	85	7	1	194

## (C) HOUSING OF THE WORKING CLASSES ACTS, 1890 TO 1909.

During 1912 proceedings under these Acts were taken with regard to 95 houses in 11 tenements which were represented as unfit for human habitation under Section 17 of the Act of 1909.

Of the houses represented, 47 were single apartments, and 48 were two-apartment houses. Of these, 11 single apartments and 11 two-apartment houses were unoccupied, but in the other houses there were 158 adults and 63 children, making a total of 221.

The following Table gives the Ward distribution, the number and size of houses represented, and the number of persons affected:—

## HOUSING, TOWN PLANNING, &amp;C., ACT, 1909.

## STATEMENT OF THE NUMBER OF HOUSES AND OF THE PERSONS AFFECTED IN EACH WARD, 1912.

WARD.	DATE.	ADDRESS.	HOUSES.				POPULATION.										
			Apartments.				1 Apt.		2 Apts.		3 Apts.		4 Apts.		Total.		
			1	2	3	4	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Ad.	Ch.	Total
I.	30th Apr.	24 Oswald Street,	(10)12	(3)4	...	...	4	...	2	...	...	...	...	...	6	...	6
IV.	13th Mar.	18 School Wynd,	1	3	...	...	2	...	8	7	...	...	...	...	10	7	17
	"	14 "	4	...	...	...	7	6	...	...	...	...	...	...	7	6	13
	"	14 "	2	...	...	...	4	1	...	...	...	...	...	...	4	1	5
	"	14 "	(1)5	2	...	...	7	1	5	...	...	...	...	...	12	1	13
	"	20 "	...	2	...	...	...	...	3	3	...	...	...	...	3	3	6
			12	7	...	...	20	8	16	10	...	...	...	...	36	18	54
XX.	5th Mar.	99 Wallace Street,	...	(4)24	...	...	...	...	47	21	...	...	...	...	47	21	68
	16th Apr.	174 Centre Street,	5	(1)5	...	...	7	2	12	4	...	...	...	...	19	6	25
	"	172/174 "	5	(1)3	...	...	9	4	9	3	...	...	...	...	18	7	25
	"	166/174 "	10	1	...	...	17	3	2	1	...	...	...	...	19	4	23
	"	82/90 "	3	(2)4	...	...	8	5	5	2	...	...	...	...	13	7	20
			23	37	...	...	41	14	75	31	...	...	...	...	116	45	161
		SUMMARY—															
		Total, - -	47	48	...	...	...	...	...	...	...	...	...	...	...	...	...
		Empty, - -	11	11	...	...	...	...	...	...	...	...	...	...	...	...	...
		Occupied, -	36	37	...	...	65	22	93	41	...	...	...	...	158	63	221

The small figures in brackets show the number of empty houses of each size at each address at the time of representation.

The operations under the Housing, Town Planning, &c., Act, 1909, are summarised in the following Table:—

## SUMMARY OF REPRESENTATIONS UNDER THE HOUSING, TOWN PLANNING, &amp;C., ACT, 1909.

Year of Representation.	Total Represented.	Demolished.	Closed.	Business.	Repaired.	Closing Order Failed.
1910,	22*	13	5	1	2	1
1911,	...	...	...	...	...	...
1912,	11	5	5	...	...	1
	33	18	10	1	2	2

\* For details see Report 1910, page 97.



In five instances in 1912 the houses were demolished, in five more they were closed, while the Closing Order was withdrawn for the remaining case. The number of each class of house is given on page 94.

In the following Table the information contained in the previous summary is shown in relation to the Wards affected:—

WARD SUMMARY OF RESULTS OF REPRESENTATIONS IN 1910 AND 1912 UNDER THE  
HOUSING, TOWN PLANNING, &c., ACT, 1909.

WARD.	Total Repre- sented.	Demolished.	Closed.	Business.	Repaired.	Closing Order Failed.
1. Dalmarnock, - -	3	1	1	...	1	...
2. Calton, - - -	3	1	1	1	...	...
3. Mile-end, - - -	2	1	...	...	1	...
4. Whitevale, - - -	2	...	2	...	...	...
9A Blackfriars, - - -	2	...	2	...	...	...
10. Exchange, - - -	2	2	...	...	...	...
14. Sandyford, - - -	6	6	...	...	...	...
16. Cowcaddens, - -	1	...	...	...	...	1
19. Gorbals, - - -	1	1	...	...	...	...
20. Kingston, - - -	9	4	4	...	...	1
21. Govanhill, - - -	2	2	...	...	...	...
	33	18	10	1	2	2

INSANITARY AND OBSTRUCTIVE BUILDINGS IN  
CONGESTED AREAS.

The following memorandum was prepared to illustrate the character of the problem presented when the obstructed character of an area is produced by the combined action of several buildings which individually are inadequate in size to accomplish this:—

SCHOOL WYND AREA.

This name may be applied to portion of the area between Argyle Street, North Street, Union Place, and Perth Street, Anderston, but included in Sandyford Ward and forming one of its worst parts.

From North Street it is penetrated by Canning Street and Cameron Court, while School Wynd enters off Argyle Street and runs parallel to Perth Street. There is much irregularity in the placing of the several buildings, and many are mutually obstructive. Several also contain grave internal defects in design and structure.

School Wynd is a lane with an average width of about 12 feet, running from Argyle Street to Union Place.

On its east side the front tenements at Nos. 10, 12, 14, 18, and 20, and the one-storey back tenement at No. 20, are all unfit for human habitation.

No. 8 is a three-storey building, with the individual houses in fair condition, but with dark and unventilated lobbies—24 feet long—running from back to front of the building, and individual houses are without through ventilation.

No. 10-12 is stated to have been closed for over a year.

No. 14 is a court entering off School Wynd with houses on both sides.

Those entering from 1st left are already closed; in those entering 2nd left the ground floor houses are below the court level; structural neglect is marked in all, and the building interferes with the lighting and ventilation of the back houses in the adjacent tenement entering from Cameron Court, which is only about 10 feet distant.

On the right side of the court the single storey one-apartment houses are in disrepair and the walls damp in places, while leaks arise here and there from defects in the roof. The two-storey backland west of this is also in a neglected condition.

*No. 18 School Wynd* is a two-storey tenement where the houses are all bad with dampness in the walls, leaking roof, and evidence of disrepair generally. Some of the apartments are campceiled, and barely 6 feet high.

*No. 20 School Wynd* is a one-storey building with damp walls, decayed and broken plaster, and evidence of disrepair throughout.

The tenements on the west side of School Wynd are separated by so small an interval from the back of the tenements on the east side of Perth Street that the lower-storey back rooms of both are inadequately lit or ventilated.

At 9 School Wynd there is a three-storey tenement now unoccupied.

*No. 21 School Wynd* is a three-storey tenement separated from one at 22 Perth Street by an interval of only 12 feet, so that the back apartments, especially on the lower floors, have their lighting defective and their ventilation impeded. It has also internal "T"-shaped lobbies about 24 feet long, and lit only by borrowed light over doorways. Moreover, the building is old and neglected, and the plaster in both houses and lobbies much decayed.

A two-storey tenement at 25-27 School Wynd, on the other hand, suffers mainly from its proximity to school premises higher than itself on the west and north, and distant from them only by about 11 and 4 feet respectively.

There is evidence of structural neglect as well, but repair in this direction would not remove the defects in lighting and ventilation which arise from situation.

**EAST SIDE OF PERTH STREET.—***No. 10.*—The ground houses to the back of this tenement are closed, and there is considerable evidence of neglect of structure throughout the building. The lighting and ventilation of the back houses are impaired by the building at No. 9 School Wynd. On each landing one house is through and through; and two are back to back—all upstairs are two apartments.

*No. 16.*—Here all the houses are of one apartment. The lobbies are "T"-shaped, and all the houses show evidence of neglect of structure, with bulging or crumbling plaster in places and leaking roof.

*22 Perth Street.*—This is a three-storied tenement of one and two-apartment houses in better repair than those at Nos. 10 and 16. The buildings fronting Argyle Street, and those forming Cameron Court, Canning Street, and Union Place, are in better condition than those just described, and may for the moment be left out of consideration.

**PROCEDURE.**—The tenements at 10, 12, 14, 18, 20, 9, and 21 School Wynd might each so far as not already closed be represented separately and simultaneously under Section 17 because of internal defects; while No. 8 would supply a fair illustration for testing the power of Sections 15 or 17 to open up dark and unventilated lobbies, and to provide through ventilation for back-to-back houses. But No. 25-27 is objectionable mainly because neighbouring buildings obstruct its light and ventilation.

Having in view the decision of the Sheriff in 75 Brown Street and 50 Crown Street, it is not certain, however, whether these separate representations would be upheld in Court.

Moreover, no statement of the structural and therefore presumably remediable defects special to each tenement could be made to include a reference to their

collective action in obstructing the lighting and ventilation of adjacent buildings and the ventilation of the area as a whole without definitely raising the question whether they are proper subjects to be dealt with by Section 17 at all.

This becomes more obvious, I think, when we come to consider the subsequent use of the sites which these buildings at present occupy. Next in importance to getting rid of the buildings themselves as unfit for habitation is the improvement which would result in the ventilation of the area on which they stand and of the houses which surround it. This assumes control of the sites after demolition of the buildings, and it seems a very questionable, even if a possible, use of the provision of the Acts to aim at the demolition of adjacent buildings separately under Sections 17 and 18 (2) of the 1909 Act on an allegation of inherent structural defects, and then to urge that their sites should remain permanently cleared for an entirely different reason, viz., that buildings erected on them would collectively obstruct the ventilation and lighting of the area.

In any case, Section 18 (2) of the 1909 Act assumes the possibility of rendering the house fit for habitation, and provided the owner repaired the defects specified in the representation, withdrawal of the Closing Order could scarcely be refused on the ground that the buildings collectively were also obstructive to the ventilation of the area, or of each other and of adjacent buildings.

Again, the provision of Section 34 of the principal Act prohibiting the erection of any other building on the site of one which has been demolished was probably never intended to become operative against a number of adjacent buildings sufficiently large to constitute an area, and indeed Section 39 of the 1890 Act would appear to have been designed for the express purpose of dealing with conditions like those here existing.

This is the Clause which seems to me to afford the most direct way of dealing with the School Wynd portion of the area in question, and should negotiations with the owners fail to accomplish the permanent clearance required, I submit certain information regarding the number of houses affected, their rentals, and the approximate acreage included, in order that the Local Authority may pass the resolution required by Sub-Section (1) (b) thereof.

Simultaneously the houses on the east side of Perth Street would be dealt with under the repair Sections of the 1909 Act.

NUMBER AND SIZE OF HOUSES ENTERING FROM SCHOOL WYND (CENSUS 1911)  
AND ASSESSABLE RENTAL THEREOF.

23 houses of 1 apartment inhabited by 59 persons	
20 houses of 2 apartments inhabited by 99 persons	
<hr/>	
43 houses inhabited by ... ..	158 persons
<hr/>	

In addition, five houses were empty. The combined assessable rentals of these premises as given me by the Assessor is £253 12s. There are also certain business and other premises assessed at £82 per annum.

Sanitary Chambers,  
Glasgow, 8th February, 1912.

The final decision of the Corporation to acquire the area as an open space affects 12 one-apartment and 7 two-apartment houses, one of the former being empty. Six of the buildings were purchased, containing 44 one-apartment and 25 two-apartment houses, of which 10 one-apartment and 3 two-apartment houses were empty.

In all the total population affected was 219, of which 153 were adults and 66 children.



DEMOLISHED AFTER REPRESENTATION.										POPULATION AS AT DATE OF REPRESENTATION.											
										OCCUPIED.			UNOCCUPIED.			TOTAL.					
										1 Apt.	2 Apt.	3 Apt.	1 Apt.	2 Apt.	3 Apt.	1 Apt.	2 Apt.	3 Apt.			
										Ad.	Ch.	Tl.	Ad.	Ch.	Tl.	Ad.	Ch.	Tl.			
Represented 13th March, 1912.	18 School Wynd, - - -	-	-	-	1	3	...	...	...	1	3	...	...	...	2	...	...	...	Demolished July, 1912.		
	14 School Wynd (south side of court), -	-	-	-	4	...	...	...	...	4	...	...	...	...	7	6	...	...	" April, 1913.		
	14 School Wynd (south-west of court), -	-	-	-	2	...	...	...	...	2	...	...	...	...	4	1	...	...	" April, 1913.		
	14 School Wynd (north-east tenement),	-	-	-	4	2	...	...	1	...	5	2	...	...	7	1	5	...	" July, 1912.		
	20 School Wynd, - - -	-	-	-	...	2	...	...	...	...	...	2	...	...	...	3	3	6	" July, 1912.		
										11	7	...	1	...	...	12	7	...			
										18			1			19					

## HOUSES IN CONGESTED AND INSANITARY AREAS.

In compliance with an instruction of the Corporation, I reported on this subject in November, 1911, and in doing so referred to a survey which had been carried out for the purposes of the enquiry. The details of this survey were embodied in a portion of the Report which was not printed, but its conclusions were thus indicated (see Annual Report, 1911, pp. 144-5):—

“As a general rule demolition is recommended in the following circumstances:—

- “(1) When a tenement is so planned or is in such a state of structural neglect that its defects are practically irremediable; or
- “(2) When, being a back land, it obstructs the ventilation of the area or the lighting and ventilation of front tenements, or is similarly obstructed by them or by other buildings including business premises in the interior of the block.”

Frequent questions have arisen since then regarding the number of tenements so affected, and the following summary, which was submitted to the Committee on Housing in December, 1912, is here introduced. It is to be read in the following way:—

*Group A* contains eight Wards, whose annual death-rates are always in excess of the City rate; and

*Group B* contains seven Wards, whose annual death-rates occasionally exceed the City rate. No Ward is included in which the death-rate never reaches the average for the City, although isolated spots in such Wards may present features which would have brought them within one or other of the categories mentioned.

“Street blocks” are defined in the Report as “every group of buildings contained within boundary streets.” “External” and “Internal” buildings have obvious meanings.

The blocks vary in size and in the number of tenements contained in them. Collectively they number 163, and include 293 external and 8 internal tenements which require repair or reconstruction, and 228 external and 429 internal tenements where demolition is desirable. The average number of houses per tenement may be stated as between 9 and 10.

## SUMMARY OF TENEMENTS IN CONGESTED AND INSANITARY AREAS.

## PART II. OF REPORT, 1911.

Ward.	No. of Street Blocks.	External Buildings.		Internal Buildings.	
		Repair or Reconstruction.	Demolition.	Repair or Reconstruction.	Demolition.
Group "A."					
Broomielaw, ...	6	17	...	...	15
Cowcaddens, ...	18	26	53	...	29
Calton, ...	18	53	5	...	60
Blackfriars, ...	14	12	22	...	33
Mile-end, ...	19	53	18	...	60
Hutchesontown, ...	8	6	2	...	48
Dalmarnock, ...	13	28	21	...	52
Whitevale, ...	16	14	23	...	44
Group "B."					
Anderston, ...	6	27	22	...	7
Townhead, ...	15	10	15	...	34
Kingston, ...	11	13	18	1	33
Sandyford, ...	4	15	12	...	1
Springburn, ...	5	5	...	7	4
Gorbals, ...	8	14	7	...	8
Kinning Park, ...	2	...	10	...	1
	163	293	228	8	429

## Repair—

External, ...	293
Internal, ...	8
	<u>301</u>

## Demolition—

External, ...	228
Internal, ...	429
	<u>657</u>

Total Tenements, ... 958

## HOUSING, TOWN PLANNING, &amp;c., ACT, 1909 (SECTION 35).

Four applications for certificates under this section were made and granted during the year, the houses being in a satisfactory condition. The certificates enable claims to be made for exemption from inhabited house duty.

## FARMED-OUT HOUSES.

Appendix Table XLII. shows the number of farmed-out houses in the City, and the number of persons occupying them, as ascertained by special census. The total number of such houses was 1,175, of which 755 were of one apartment and 420 of two apartments.

The population inhabiting these houses numbered 3,141, of whom 1,372 adults and 277 children were found in one-apartment houses and 1,127 adults and 365 children in houses of two apartments.

## HOUSES LET IN LODGINGS.

Closely associated with the farmed-out houses are those let in lodgings, the distinction between them being to a large extent a technical one. An enumeration of the number of persons living in houses let in lodgings was also taken, when 175 houses were found occupied by 422 families, consisting of 1,209 persons. The Ward distribution of the houses let in lodgings is shown in Appendix Table XLIII.



## SECTION V.

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### OFFENSIVE TRADES.

During the year no applications, under Section 32 of the Public Health (Scotland) Act, 1897, were made to the Local Authority for sanction to establish offensive trades.

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## SECTION VI.

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SPECIFIC ACCOUNT OF THE ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901, IN WORKSHOPS, AND WORKPLACES, IN TERMS OF SECTION 132 OF THAT ACT TOGETHER WITH A TABULAR STATEMENT IN THE FORM ISSUED BY THE HOME OFFICE.

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### REGISTER OF WORKSHOPS, &c.

A statement of the number of laundries, bake-houses, restaurant kitchens, other food places, and all other workshops, as well as the total number of workshops in each Ward of the City, is contained in Appendix Table XLIV. The total number of the registered workshops in the City is 6,565, as against 5,817 last year.

33,318 inspections were made to these premises, and 1,346 notices were issued.

Table No. 1 of the Home Office List, which forms Appendix Table XLV. of the present report, requires that the number of inspections of such factories and factory laundries as are, by Section 103 of the Factory Act, placed under the jurisdiction of the Local Authority for sanitary purposes, and also of workplaces as distinct from workshops, should be stated, but the total visits are here included under workshops. In general, the visits made to factories under the Public Health Act are for the purpose of discovering structural defects in connection with water-closets in the form of choked drains, &c.

### SANITARY CONDITION OF WORKSHOPS.

*Want of Cleanliness.*—Speaking generally, it may be said that the condition in respect of cleanliness in the majority of workshops is satisfactory. In the 501 instances noted in the Table in which it was defective the remedy largely consisted of limewashing.

*Lighting and Ventilation.*—In 39 cases this was defective. A variety of industries were involved, the main defects being fixed roof-lights or fixed windows.

*Overcrowding.*—The overcrowding here noted occurred during the day only. There is no record of any overcrowding during periods of overtime work in the evenings, as knowledge when overtime is worked is not usually within the command of the Department.

*Want of Drainage of Floors.*—These defects are now chiefly found in laundries which are conducted in premises originally intended for shops. The number of these—559—is included, along with other defects, such as choked closets and requests to limewash, in the total given, as representing both in the Table.

*Sanitary Accommodation.*—Here, again, the several items of the Table—"Insufficient," "Unsuitable," and "not separate"—are grouped together under the 99 instances found.



CONDITION OF AIR IN OVERGROUND BAKEHOUSES IN CERTAIN CASES.

WARD.	ADDRESS.	AIR SAMPLES. CO <sub>2</sub> in 10,000 volumes of Air.			REMARKS.
		1st	2nd	3rd	
I.	143 Main Street, ... ..	15.3	5.9	...	Ventilation improved.
"	251 London Road, ... ..	11.5	5.9	...	" "
"	132 Bernard Street, ... ..	21.1	5.0	...	" "
II.	71 Green Street, ... ..	13.5	7.6	...	" "
"	496 Gallowgate, ... ..	13.6	8.5	...	" "
III.	637 Gt. Eastern Road, ... ..	16.1	7.6	...	" "
IV.	140 Duke Street, ... ..	10.6	9.2	...	" "
"	152 Duke Street, ... ..	10.7	9.2	...	" "
"	320 Duke Street, ... ..	12.2	6.4	6.0	" "
"	751 Gallowgate, ... ..	15.8	10.2	...	" "
V.	14 Hillfoot Street, ... ..	16.0	16.7	8.2	" "
"	28 Dunchattan Street, ... ..	10.6	9.9	...	" "
VII.	18 Hillside Street, ... ..	11.8	5.0	...	" "
VIII.	107 Montrose Street, ... ..	13.3	15.2	12.4	" "
IX.	26 George Street, ... ..	10.2	15.2	...	" "
XV.	178 St. George's Road, ... ..	9.3	14.1	5.7	" "
XVI.	13 Grove Street, ... ..	12.9	12.5	6.4	" "
"	1 Milton Street, ... ..	7.7	10.5	7.3	" "
XXI.	18 Dixon Avenue, ... ..	11.0	8.9	5.1	" "
XXII.	1003 Cathcart Road, ... ..	11.0	5.9	...	" "

SUMMARY OF RESULTS OF 40 AIR SAMPLES TAKEN DURING THE YEAR FROM  
40 OVERGROUND BAKEHOUSES.

Amount of CO <sub>2</sub> per 10,000 Vols. of Air.								Number of Bakehouses.
From 4 to 5,	...	...	...	...	...	...	...	3
Under 6,	...	...	...	...	...	...	...	8
" 7,	...	...	...	...	...	...	...	1
" 8,	...	...	...	...	...	...	...	5
" 9,	...	...	...	...	...	...	...	5
" 10,	...	...	...	...	...	...	...	1
" 11,	...	...	...	...	...	...	...	6
" 12,	...	...	...	...	...	...	...	4
" 13,	...	...	...	...	...	...	...	1
" 14,	...	...	...	...	...	...	...	1
" 15,	...	...	...	...	...	...	...	1
" 16,	...	...	...	...	...	...	...	1
" 17,	...	...	...	...	...	...	...	2
" 24,	...	...	...	...	...	...	...	1
								<hr/> 40 <hr/>

This Table shows that in 11 bakehouses the impurity was below 6 parts in 10,000, and that

in 12 bakehouses the impurity was over 6 and under 10					
" 6	"	"	10	"	11
" 10	"	"	11	"	17

Most of these latter results were obtained either when the ovens were being drawn, or because the ventilation was somewhat obstructed, owing to the dough undergoing the process of fermentation. In one case the



ventilation was improved, while in several others improvement had not been completed at the close of the year. The last sample, which figures at the high rate of 23·3 parts CO<sub>2</sub>, from premises with improved ventilation, was taken under abnormal working conditions. The previous air sample from the same bakehouse was only 5·4 parts CO<sub>2</sub>.

#### (1) UNDERGROUND BAKEHOUSES.

Fifty-three underground bakehouses remain in occupation in Glasgow, there being 12 others not in use. Of these, 52 are certified as conforming to the requirements for underground bakehouses.

During the year 138 inspections were made to the bakehouses on the register, and on these occasions the fans were invariably found in use, the result, no doubt, of the action taken in previous years in checking the use of the fans by the condition of the air.

Table L. contains a statement of the number of each class in the several Wards, and the number of visits paid thereto during the year.

#### (2) BAKEHOUSES NOT UNDERGROUND.

It will be seen from Appendix Table LI. that the number of bakehouses not underground on the register at the close of the year was 195 in the extended City, as compared with 160 at the close of 1911 in the former area. In addition, there are shown in Table XLIV. certain premises which are provided with hot-plates for baking purposes. Under this classification, should a dairy carry on its baking in an underground apartment, the question will require to be reconsidered as to whether it should not be added to the list of bakehouses, as much more stringent regulation is then possible.

#### REGISTRATION OF HAIRDRESSERS.

Appendix Table LII. shows the number and Ward distribution of registered hairdressers, and the changes which have taken place during the year, as well as the number of visits of inspection to these premises.

A. K. CHALMERS,  
*Medical Officer of Health.*

Sanitary Chambers,  
Glasgow, 31st July, 1913.



## APPENDIX I.

## GLASGOW: BEFORE EXTENSION OF BOUNDARIES, 1912.

TABLE I.

GLASGOW, 1912.—INHABITED HOUSES AND POPULATION FOR EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES.				POPULATION.			
	1911.	1912.	Decrease.	Increase.	1911.	1912.	Decrease.	Increase.
1. Dalmarnock, -	10,864	10,928	...	64	50,929	51,252	...	323
2. Calton, - -	7,619	7,590	29	...	34,735	34,612	123	...
3. Mile-end, - -	9,721	9,810	...	89	45,599	46,034	...	435
4. Whitevale, -	6,671	6,725	...	54	31,262	31,523	...	261
5. Dennistoun, -	8,484	8,602	...	118	36,911	37,436	...	525
6. Springburn, -	9,469	9,443	26	...	44,786	44,680	106	...
7. Cowlares, - -	6,261	6,342	...	81	29,555	29,951	...	396
8. Townhead, - -	7,584	7,472	112	...	35,850	35,327	523	...
9. Blackfriars, -	4,068	4,018	50	...	19,645	19,407	238	...
10. Exchange, - -	268	293	...	25	1,400	1,526	...	126
11. Blythswood, -	450	441	9	...	2,421	2,374	47	...
12. Broomielaw, -	1,255	1,182	73	...	6,504	6,125	379	...
13. Anderston, - -	6,007	5,996	11	...	27,793	27,751	42	...
14. Sandyford, - -	5,065	4,959	106	...	23,866	23,374	492	...
15. Park, - - -	4,791	4,746	45	...	22,487	22,286	201	...
16. Cowcaddens, -	7,317	7,201	116	...	34,122	33,590	532	...
17. Woodside, - -	9,021	9,166	...	145	40,351	41,009	...	658
18. Hutchesontown, -	8,534	8,505	29	...	39,153	39,031	122	...
19. Gorbals, - - -	6,835	6,770	65	...	32,910	32,609	301	...
20. Kingston, - -	6,857	6,756	101	...	32,541	32,072	469	...
21. Govanhill, - -	7,780	7,928	...	148	35,287	35,966	...	679
22. Langside, - - -	9,706	9,837	...	131	39,980	40,527	...	547
23. Pollokshields, -	3,759	3,750	9	...	17,663	17,624	39	...
24. Kelvinside, - -	4,745	4,795	...	50	20,982	21,205	...	223
25. Maryhill, - - -	8,721	8,652	69	...	39,976	39,672	304	...
26. Kinning Park, -	2,676	2,634	42	...	12,906	12,710	196	...
Institutions, -	...	...	...	...	23,818	23,815	3	...
Shipping, - - -	...	...	...	...	1,064	1,064	...	...
City, - - - -	164,528	164,541	...	13	784,496	784,552	...	56



TABLE II.—UNOCCUPIED HOUSES.

Number of UNOCCUPIED HOUSES in the several MUNICIPAL WARDS,  
classified according to size, as at 1st June, 1912.

MUNICIPAL WARDS.	1 Apart- ment.	2 Apart- ments.	3 Apart- ments.	4 Apart- ments.	5 Apart- ments and up.	TOTAL.
1. Dalmarnock, ...	399	909	85	10	1	1,404
2. Calton, ...	262	461	123	20	11	877
3. Mile-end, ...	321	751	94	9	...	1,175
4. Whitevale, ...	160	479	166	24	4	833
5. Dennistoun, ...	38	248	154	74	26	540
6. Springburn, ...	457	812	112	10	4	1,395
7. Cowlares, ...	177	563	107	8	1	856
8. Townhead, ...	172	604	172	74	22	1,044
9. Blackfriars, ...	97	281	115	48	15	556
10. Exchange, ...	5	12	16	5	5	43
11. Blythswood, ...	...	6	13	14	14	47
12. Broomielaw, ...	11	55	79	30	3	178
13. Anderston, ...	65	237	144	32	49	527
14. Sandyford, ...	76	143	148	43	84	494
15. Park, ...	11	61	74	132	147	425
16. Cowcaddens, ...	388	689	214	41	23	1,355
17. Woodside, ...	225	530	193	53	48	1,049
18. Hutchesontown, ...	225	656	78	6	1	966
19. Gorbals, ...	119	286	307	78	55	845
20. Kingston, ...	136	362	297	82	7	884
21. Govanhill, ...	86	411	200	63	16	776
22. Langside, ...	3	32	240	155	135	565
23. Pollokshields, ...	5	17	15	50	161	248
24. Kelvinside, ...	...	6	60	81	156	303
25. Maryhill, ...	242	724	172	36	99	1,273
26. Kinning Park, ...	51	125	48	2	3	229
City, ...	3,731	9,460	3,426	1,180	1,090	18,887

TABLE III.

COMPARATIVE TABLE OF LININGS GRANTED BY DEAN OF GUILD COURT FOR THE YEARS ENDING  
31st AUGUST, 1911 AND 1912.

DISTRICTS.	NO. OF APARTMENTS.												TOTALS.	
	1.		2.		3.		4.		5.		6.			
	1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.	1911.	1912.
Central, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Western, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Eastern, ...	48	...	120	74	17	6	...	2	...	...	...	...	185	82
Southern, ...	...	3	...	18	...	...	...	...	...	...	...	...	...	21
Northern, ...	6	...	21	...	...	...	...	...	...	...	...	...	27	...
St. Rollox, ...	...	3	20	10	...	...	4	...	...	2	...	...	24	15
Queen's Park,	...	...	...	18	24	33	6	3	6	4	4	2	40	60
Maryhill, ...	...	...	...	...	...	14	...	8	6	...	2	...	8	22
	54	6	161	120	41	53	10	13	12	6	6	2	284	200

TABLE IV.—ACREAGE, INHABITED HOUSES, and PERSONS per ACRE in each MUNICIPAL WARD in 1912; also the POPULATION and PERSONS per ACRE at the CENSUS of 1911, and the PERCENTAGE INCREASE or DECREASE in the POPULATION during the Intervening Period.

MUNICIPAL WARDS.			Acreage 1912.	Inhabited Houses, 1912.	POPULATION.						Persons per Acre (including Institutions and Shipping).	
					Census 1911.	Estimated middle of 1912.	Increase.	Decrease.	Per Cent. Increase.	Per Cent. Decrease.		
1.	Dalmarnock,	...	550	10,928	51,161	51,252	91	...	0.2	...	95	94
2.	Calton, ...	...	327	7,590	35,140	34,612	...	528	...	1.5	114	113
3.	Mile-end,	...	514	9,810	45,652	46,034	382	...	0.8	...	90	91
4.	Whitevale,	...	309	6,725	31,931	31,523	...	408	...	1.3	108	106
5.	Dennistoun,	...	731	8,602	36,214	37,436	1,222	...	3.4	...	52	54
6.	Springburn,	...	1,567	9,443	44,813	44,680	...	133	...	0.3	32	31
7.	Cowfairs,	...	952	6,342	29,444	29,951	507	...	1.7	...	31	31
8.	Townhead,	...	250	7,472	36,469	35,327	...	1,142	...	3.1	146	142
9.	Blackfriars,	...	130	4,018	19,953	19,407	...	546	...	2.7	162	159
10.	Exchange,	...	116	293	1,672	1,526	...	146	...	8.7	18	20
11.	Blythwood,	...	88	441	2,795	2,374	...	421	...	15.1	35	33
12.	Broomielaw,	...	98	1,182	6,752	6,125	...	627	...	9.3	85	83
13.	Anderston,	...	443	5,996	27,723	27,751	28	...	0.1	...	66	66
14.	Sandyford,	...	133	4,959	23,596	23,374	...	222	...	0.9	180	178
15.	Park, ...	...	329	4,746	22,307	22,286	...	21	...	0.1	71	71
16.	Cowcaddens,	...	158	7,201	33,898	33,590	...	308	...	0.9	223	221
17.	Woodside,	...	272	9,166	41,198	41,009	...	189	...	0.5	152	152
18.	Hutchesontown,	...	213	8,505	39,931	39,031	...	900	...	2.3	187	184
19.	Gorbals,	...	229	6,770	33,192	32,609	...	583	...	1.8	149	146
20.	Kingston,	...	405	6,756	32,676	32,072	...	604	...	1.8	82	81
21.	Govanhill,	...	445	7,928	35,082	35,966	884	...	2.5	...	79	81
22.	Langside,	...	850	9,837	38,888	40,527	1,639	...	4.2	...	46	48
23.	Pollokshields,	...	1,590	3,750	17,124	17,624	500	...	3.2	...	11	11
24.	Kelvinside,	...	902	4,795	19,803	21,205	1,402	...	7.0	...	23	25
25.	Maryhill,	...	1,266	8,652	39,359	39,672	313	...	0.8	...	33	33
26.	Kinning Park,	...	108	2,634	12,841	12,710	...	131	...	1.0	119	118
—	Institutions and Shipping,	...	...	...	24,882	24,879	...	3	...	...	...	...
CITY, ...			12,975	164,541	784,496	784,552	56	...	...	...	60	60

TABLE V.

ABSTRACT of METEOROLOGICAL OBSERVATIONS taken at GLASGOW OBSERVATORY during 1912.

MONTHS.	TEMPERATURE.				RAINFALL.		
	Highest Temperature in Shade.	Lowest Temperature in Shade.	Mean Temperature for Month.	Departure from Average of 44 Years.	No. of Days it fell.	Amount Collected, in inches.	Departure from average of 44 Years.
January, ...	52°·1	23°·3	38°·2	− 0°·5	18	2·74	− 0·95
February, ...	53°·1	16°·3	40°·1	+ 1°·1	16	3·31	+ 0·28
March, ...	54°·2	31°·8	43°·1	+ 2°·8	26	4·28	+ 1·70
April, ...	66°·9	30°·0	47°·5	+ 3°·0	9	1·35	− 0·74
May, ...	64°·7	39°·8	50°·7	+ 1°·2	13	1·31	− 1·22
June, ...	67°·2	41°·5	54°·3	− 0°·8	24	4·86	+ 2·19
July, ...	73°·1	48°·9	58°·1	+ 0°·6	12	2·25	− 0·86
August, ...	64°·1	40°·3	53°·1	− 3°·6	19	4·14	+ 0·22
September, ...	61°·5	37°·0	50°·7	− 2°·4	10	2·85	− 0·58
October, ...	58°·7	31°·1	46°·7	− 0°·4	19	3·64	− 0·09
November, ...	54°·5	19°·3	42°·9	+ 0°·8	16	4·03	+ 0·41
December, ...	55°·8	23°·0	42°·4	+ 3°·4	26	6·20	+ 2·17
Total, ...	...	...	...	...	208	40·96	+ 2·53

TABLE VI.

GLASGOW, 1912.—BIRTHS and BIRTH-RATES *per Million* in each WARD, exclusive of Institutions and Harbour, with corresponding Rates for 1903-11.

MUNICIPAL WARDS.	Rate per Million.			1912.	
	1903-5.	1906-10.	1911.	Births.	Birth Rate per Million.
1. Dalrnarnock, -	40,768	38,120	34,733	1,845	35,547
2. Calton, -	33,362	32,328	30,336	1,089	29,447
3. Mile-end, -	40,881	39,644	36,384	1,693	36,378
4. Whitevale, -	32,866	32,530	29,595	1,022	31,153
5. Dennistoun, -	29,426	26,143	25,211	907	23,094
6. Springburn, -	41,301	38,627	35,994	1,612	32,830
7. Cowlairst, -	36,291	32,810	30,634	942	31,415
8. Townhead, -	31,861	30,786	25,583	928	26,178
9. Blackfriars, -	32,483	31,453	28,066	609	29,509
10. Exchange, -	19,838	19,426	14,952	25	10,951
11. Blythswood, -	10,182	10,764	8,945	24	8,307
12. Broomielaw, -	30,697	30,263	30,361	184	22,719
13. Anderston, -	33,421	32,244	28,893	874	29,951
14. Sandyford, -	24,244	22,872	21,571	517	21,806
15. Park, -	12,064	10,388	8,921	214	9,185
16. Cowcaddens, -	33,872	31,060	30,946	1,016	29,129
17. Woodside, -	32,065	28,105	26,215	1,061	25,741
18. Hutchesontown, -	39,273	37,783	35,887	1,369	35,057
19. Gorbals, -	28,688	27,507	27,597	837	24,989
20. Kingston, -	30,285	28,767	26,533	888	26,904
21. Govanhill, -	36,328	32,760	32,467	1,118	31,085
22. Langside, -	20,538	20,305	20,392	790	19,192
23. Pollokshields, -	10,531	8,692	10,220	151	8,568
24. Kelvinside, -	12,074	11,455	14,038	258	11,675
25. Maryhill, -	40,500	34,851	30,895	1,296	31,454
26. Kinning Park, -	...	35,428	33,331	465	36,585
— Institutions and Harbour, -	...	...	...	78	...
CITY, -	31,428	29,208	27,513	21,812	27,802



TABLE VII.

GLASGOW, 1912.—ALL CAUSES.—DEATHS and DEATH-RATES *per Million* in each MUNICIPAL WARD. with corresponding rates for 1903-11.

MUNICIPAL WARDS.	Rate per Million.			1912.	
	1903-5.	1906-10.	1911.	Deaths.	Rate per Million.
1. Dalarnock, -	19,754	20,010	18,588	814	15,882
2. Calton, -	22,458	21,990	19,351	731	21,120
3. Mile-end, -	21,753	20,229	19,035	889	19,312
4. Whitevale, -	19,633	18,701	17,381	581	18,431
5. Dennistoun, -	12,852	12,231	11,266	417	11,139
6. Springburn, -	18,332	17,170	15,821	735	16,450
7. Cowlares, -	15,879	14,926	14,944	389	12,988
8. Townhead, -	18,486	18,089	16,508	608	17,211
9. Blackfriars, -	21,698	21,318	18,393	429	22,105
10. Exchange, -	18,072	16,689	16,746	18	11,796
11. Blythswood, -	13,895	11,041	12,880	27	11,373
12. Broomielaw, -	23,370	23,636	22,660	137	22,367
13. Anderston, -	18,725	18,805	17,783	465	16,756
14. Sandyford, -	16,579	17,843	15,426	383	16,386
15. Park, -	10,732	10,834	11,387	261	11,711
16. Cowcaddens, -	23,372	21,583	19,588	638	18,994
17. Woodside, -	15,129	15,298	14,491	591	14,411
18. Hutchesontown, -	20,688	19,463	18,056	653	16,730
19. Gorbals, -	17,994	17,472	15,636	484	14,843
20. Kingston, -	18,017	18,077	18,331	529	16,494
21. Govanhill, -	14,570	14,868	13,340	499	13,874
22. Langside, -	9,555	9,380	9,309	413	10,191
23. Pollokshields, -	8,991	8,915	10,453	179	10,157
24. Kelvinside, -	7,406	7,347	8,888	169	7,970
25. Maryhill, -	15,063	14,142	12,754	558	14,065
26. Kinning Park, -	...	18,950	16,821	210	16,522
— Institutions & Harbour, -	...	...	...	953	...
CITY, -	18,292	17,508	16,441	12,760	16,264

TABLE VIII.—GLASGOW, 1912.—DEATHS IN INSTITUTIONS (INTRA-MURAL) OF PERSONS BELONGING TO THE CITY, BUT WITH NO HOME ADDRESS, SHOWING CAUSES and AGES.

CAUSE OF DEATH.	AGES.								Total.
	- 1	- 2	- 5	- 15	- 25	- 45	- 65	65 +	
Smallpox, ...	...	...	...	...	...	...	...	...	...
Diphtheria and M. Croup, ...	...	...	1	...	...	...	...	...	1
Enteric Fever, ...	...	...	...	...	...	1	...	...	1
Typhus Fever, ...	...	...	...	...	...	1	...	...	1
Scarlet Fever, ...	...	...	1	...	...	...	...	...	1
Cerebro-Spinal Fever, ...	...	...	...	...	...	...	...	...	...
Measles, ...	...	1	...	...	1	...	...	...	2
Whooping-cough, ...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis, ...	27	10	4	...	1	1	1	...	44
Other Digestive Diseases, ...	3	...	1	...	2	3	4	3	16
Puerperal Fever, ...	...	...	...	...	1	...	...	...	1
Erysipelas, ...	...	...	...	...	...	...	1	1	2
Other Septic Diseases, ...	...	...	1	1	...	...	4	...	6
Phthisis (Pulmonary), ...	...	...	...	2	16	87	57	12	174
Tubercular Meningitis, ...	...	...	1	1	...	1	...	...	3
Abdominal Tuberculosis, ...	...	...	1	4	...	...	...	...	5
Other Tuberculous Diseases, ...	4	1	4	6	4	2	2	2	25
Cancer, ...	...	...	...	...	...	3	19	11	33
Rheumatic Fever, ...	...	...	...	...	...	...	...	...	...
Meningitis (not Tubercular), ...	...	...	...	...	...	...	...	...	...
Cerebral Hæmorrhage, ...	...	...	...	...	...	3	17	21	41
Other Nervous Diseases, ...	...	...	1	1	...	9	21	7	39
Circulatory Diseases, ...	1	...	1	1	6	16	72	122	219
Pneumonia, ...	...	2	1	...	2	17	33	15	70
Bronchitis, ...	1	1	3	...	2	1	28	46	82
Other Respiratory Diseases, ...	...	...	...	...	...	3	4	3	10
Croup, ...	1	...	...	...	...	...	...	...	1
Influenza, ...	...	...	...	...	...	...	1	1	2
Violence, ...	...	...	...	1	3	11	12	7	34
Premature Births, ...	10	...	...	...	...	...	...	...	10
Unknown, ...	1	...	...	...	...	2	5	...	8
All others, ...	7	2	1	5	1	11	42	53	122
Totals, ...	55	17	21	22	39	172	323	304	953
Per thousand Institutional Deaths, ...	58	18	22	23	41	180	339	319	1,000

TABLE IX.

GLASGOW, 1912.—DEATHS IN INSTITUTIONS (INTRA-MURAL) OF PERSONS BELONGING TO THE CITY, BUT WITH NO HOME ADDRESS, SHOWING WHERE DEATH OCCURRED.

Cause of Death.	Poor Law Institutions.	Model Lodging-houses.	General Hospitals.	Infectious Diseases Hospitals.	Homes for Old Men and Women and Orphans, Barracks, Prisons, Asylums, and Harbour.	Total.
Smallpox, ... ..	...	...	...	...	...	...
Diphtheria and M. Croup, ...	1	...	...	...	...	1
Enteric Fever, ... ..	...	1	...	...	...	1
Typhus Fever, ... ..	...	1	...	...	...	1
Scarlet Fever, ... ..	1	...	...	...	...	1
Cerebro-spinal Fever, ... ..	...	...	...	...	...	...
Measles, ... ..	...	...	...	...	2	2
Whooping-cough, ... ..	...	...	...	...	...	...
Diarrhoea and Enteritis, ...	41	...	...	...	3	44
Other Digestive Diseases, ...	5	5	3	...	3	16
Puerperal Fever, ... ..	1	...	...	...	...	1
Erysipelas, ... ..	...	2	...	...	...	2
Other Septic Diseases, ... ..	2	1	...	...	3	6
Phthisis (Pulmonary), ... ..	119	44	1	...	10	174
Tubercular Meningitis, ... ..	2	...	...	...	1	3
Abdominal Tuberculosis, ... ..	4	...	...	...	1	5
Other Tuberculous Diseases, ...	18	4	1	...	2	25
Cancer, ... ..	18	5	4	...	6	33
Rheumatic Fever, ... ..	...	...	...	...	...	...
Meningitis (not Tubercular), ...	...	...	...	...	...	...
Cerebral Hæmorrhage, ... ..	26	5	...	...	10	41
Other Nervous Diseases, ... ..	27	5	...	1	6	39
Circulatory Diseases, ... ..	163	29	3	...	24	219
Pneumonia, ... ..	28	35	...	...	7	70
Bronchitis, ... ..	62	17	1	...	2	82
Other Respiratory Diseases, ...	5	3	1	...	1	10
Croup, ... ..	1	...	...	...	...	1
Influenza, ... ..	...	...	...	...	2	2
Violence, ... ..	5	16	1	...	12	34
Premature Births, ... ..	8	...	1	...	1	10
Unknown, ... ..	...	6	...	...	2	8
All others, ... ..	52	28	2	...	40	122
Total, ... ..	589	207	18	1	138	953
Per cent., ... ..	61·8	21·7	1·9	0·1	14·5	100

TABLE X.

GLASGOW, 1912.—DEATHS OF PERSONS NOT BELONGING TO GLASGOW OCCURRING IN PUBLIC INSTITUTIONS AND ELSEWHERE IN GLASGOW. TRANSFERRED TO OTHER LOCAL AUTHORITIES, TABULATED ACCORDING TO DISEASE AND AGE.

	AGE.								TOTAL.
	-1	-2	-5	-15	-25	-45	-65	65+	
Smallpox, ... ..	...	...	...	...	...	...	...	...	...
Diphtheria and M. Croup, ...	...	...	...	1	...	...	...	...	1
Enteric Fever, ... ..	...	...	...	...	...	1	...	...	1
Typhus Fever, ... ..	...	...	...	...	...	...	...	...	...
Scarlet Fever, ... ..	...	...	...	...	1	1	...	...	2
Cerebro-spinal Fever, ... ..	...	...	...	...	1	...	...	...	1
Measles, ... ..	...	3	1	...	...	...	...	...	4
Whooping-cough, ... ..	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis, ...	6	...	...	...	...	...	1	...	7
Other Digestive Diseases, ...	5	2	5	31	32	58	57	14	204
Puerperal Fever, ... ..	...	...	...	...	2	8	...	...	10
Erysipelas, ... ..	...	1	...	...	...	...	...	...	1
Other Septic Diseases, ... ..	1	2	1	5	9	12	4	...	34
Phthisis (Pulmonary), ... ..	1	...	...	4	6	11	4	...	26
Tubercular Meningitis, ... ..	3	3	1	11	3	2	...	...	23
Abdominal Tuberculosis, ... ..	3	1	4	4	2	5	...	...	19
Other Tuberculous Diseases, ...	4	...	4	3	8	4	...	1	24
Cancer, ... ..	...	...	...	1	3	45	67	23	139
Rheumatic Fever, ... ..	...	...	...	...	...	...	...	...	...
Meningitis (not Tubercular), ...	1	1	1	4	2	1	...	...	10
Cerebral Hæmorrhage, ... ..	...	...	...	3	...	4	5	3	15
Other Nervous Diseases, ... ..	3	...	1	6	5	6	6	3	30
Circulatory Diseases, ... ..	1	...	2	5	8	43	45	22	126
Pneumonia, ... ..	6	6	2	6	9	26	21	3	79
Bronchitis, ... ..	...	1	1	...	...	5	8	7	22
Other Respiratory Diseases, ...	...	1	1	2	1	7	6	2	20
Croup, ... ..	...	...	...	...	...	...	...	...	...
Influenza, ... ..	...	...	...	...	...	...	...	...	...
Violence, ... ..	1	5	11	16	17	44	37	9	140
Premature Births, ... ..	22	...	...	...	...	...	...	...	22
Unknown, ... ..	...	...	...	...	...	2	1	...	3
All other Causes, ... ..	25	9	4	17	27	91	75	30	278
Total, ... ..	82	35	39	119	136	376	337	117	1,241

TABLE XI.

GLASGOW, 1912.—DEATHS OF PERSONS OCCURRING IN MERRYFLATS POORHOUSE BELONGING TO GLASGOW, TABULATED ACCORDING TO DISEASE AND AGE.

	AGE.								TOTAL.
	-1	-2	-5	-15	-25	-45	-65	65+	
Smallpox, ... ..	...	...	...	...	...	...	...	...	...
Diphtheria and M. Croup, ... ..	...	...	...	...	...	...	...	...	...
Enteric Fever, ... ..	...	...	...	...	...	...	...	...	...
Typhus Fever, ... ..	...	...	...	...	...	...	...	...	...
Scarlet Fever, ... ..	...	...	...	...	...	...	...	...	...
Cerebro-spinal Fever, ... ..	...	...	...	...	...	...	...	...	...
Measles, ... ..	...	...	...	...	...	...	...	...	...
Whooping-cough, ... ..	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis, ... ..	1	...	...	...	...	...	...	...	1
Other Digestive Diseases, ... ..	1	...	...	...	...	...	1	...	2
Puerperal Fever, ... ..	...	...	...	...	...	...	...	...	...
Erysipelas, ... ..	...	...	...	...	...	...	...	1	1
Other Septic Diseases, ... ..	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary), ... ..	1	1	1	1	9	35	14	2	64
Tubercular Meningitis, ... ..	1	...	...	...	...	...	...	...	1
Abdominal Tuberculosis, ... ..	1	...	...	...	...	...	...	...	1
Other Tuberculous Diseases, ... ..	1	1	...	...	...	4	...	...	6
Cancer, ... ..	...	...	1	...	1	4	7	4	17
Rheumatic Fever, ... ..	...	...	...	...	...	...	...	...	...
Meningitis (not Tubercular), ... ..	...	...	...	1	...	...	...	...	1
Cerebral Hæmorrhage, ... ..	...	...	...	...	...	...	7	4	11
Other Nervous Diseases, ... ..	1	...	...	1	...	1	3	1	7
Circulatory Diseases, ... ..	...	...	...	...	1	5	21	8	35
Pneumonia, ... ..	...	1	1	...	...	7	10	6	25
Bronchitis, ... ..	...	...	...	...	...	3	2	5	10
Other Respiratory Diseases, ... ..	...	...	...	...	...	3	1	...	4
Croup, ... ..	...	...	...	...	...	...	...	...	...
Influenza, ... ..	...	...	...	...	...	...	...	...	...
Violence, ... ..	...	...	...	...	...	...	1	1	2
Premature Births, ... ..	...	...	...	...	...	...	...	...	...
All other Causes, ... ..	2	...	...	...	2	3	6	3	16
Total, ... ..	9	3	3	3	13	65	73	35	204

TABLE XII.

GLASGOW, 1912.—DEATHS OF PERSONS FORMERLY RESIDENT IN GLASGOW OCCURRING IN PUBLIC INSTITUTIONS AND ELSEWHERE BEYOND THE BURGH, TABULATED ACCORDING TO DISEASE AND AGE.

CAUSE OF DEATH.	AGE.								TOTAL.
	-1	-2	-5	-15	-25	-45	-65	65+	
Smallpox, ... ..	...	...	...	...	...	...	...	...	...
Diphtheria and M. Croup, ... ..	1	...	...	...	...	...	...	...	1
Enteric Fever, ... ..	...	...	...	...	...	...	...	...	...
Typhus Fever, ... ..	...	...	...	...	...	...	...	...	...
Scarlet Fever, ... ..	...	...	1	1	2	...	...	...	4
Cerebro-spinal Fever, ... ..	...	...	...	...	...	...	...	...	...
Measles, ... ..	...	1	...	...	...	...	...	...	1
Whooping cough, ... ..	1	...	...	...	...	...	...	...	1
Diarrhœa and Enteritis, ... ..	4	...	...	1	...	...	...	...	5
Other Digestive Diseases, ... ..	...	...	...	1	2	1	4	3	11
Puerperal Fever, ... ..	...	...	...	...	1	...	...	...	1
Erysipelas, ... ..	...	...	...	...	...	...	...	...	...
Other Septic Diseases, ... ..	1	...	...	...	...	...	1	1	3
Phthisis (Pulmonary), ... ..	...	...	...	3	19	55	24	3	104
Tubercular Meningitis, ... ..	...	1	...	...	1	1	1	...	4
Abdominal Tuberculosis, ... ..	...	...	...	...	1	...	2	...	3
Other Tuberculous Diseases, ... ..	...	...	...	1	1	4	1	1	8
Cancer, ... ..	...	...	...	...	...	4	21	10	35
Rheumatic Fever, ... ..	...	...	...	...	...	...	...	...	...
Meningitis (not Tubercular), ... ..	...	1	...	...	...	1	...	1	3
Cerebral Hæmorrhage, ... ..	...	...	...	...	...	2	27	9	38
Other Nervous Diseases, ... ..	1	...	...	6	3	32	32	17	91
Circulatory Diseases, ... ..	...	...	...	...	3	11	36	38	88
Pneumonia, ... ..	2	1	...	...	2	10	7	11	33
Bronchitis, ... ..	2	...	...	...	...	3	5	10	20
Other Respiratory Diseases, ... ..	...	...	...	...	1	3	4	1	9
Croup, ... ..	...	...	...	...	...	...	...	...	...
Influenza, ... ..	...	...	...	...	...	1	...	...	1
Violence, ... ..	...	1	...	5	4	9	12	4	35
Premature births, ... ..	3	...	...	...	...	...	...	...	3
Unknown, ... ..	...	...	...	...	...	1	1	...	2
All other Causes, ... ..	7	...	...	2	5	29	44	54	141
Total, ... ..	22	5	1	20	45	167	222	163	645



TABLE XIII.

GLASGOW, 1912.—DEATH-RATES per 1,000, from "All" and "Specified" Causes, with corresponding Rates for 1911.

	1911.		1912.		-	+	-	+
I. PRINCIPAL ZYMOTIC DISEASES, ...	...	2·544	...	1·883	...	...	·661	...
Smallpox, ...	...	...	...	...	...	...	...	...
Diphtheria, ...	...	·221	...	·232	...	·011	...	...
Scarlet Fever, ...	...	·116	...	·093	...	·023	...	...
Typhus Fever, ...	...	·004	...	·003	...	·001	...	...
Enteric Fever, ...	...	·075	...	·051	...	·024	...	...
Cerebro-Spinal Fever, ...	...	·059	...	·027	...	·032	...	...
Measles, ...	...	·375	...	·664	...	·289	...	...
Whooping-cough, ...	...	·797	...	·307	...	·490	...	...
Diarrhoea and Enteritis, ...	...	·897	...	·506	...	·391	...	...
II. SEPTIC DISEASES, ...	...	·216	...	·226	...	...	...	·010
III. TUBERCULOUS DISEASES, ...	...	2·006	...	1·969	...	...	·037	...
Phthisis, ...	1·305	...	1·318	...	...	·013	...	...
Other Tuberculous Diseases, ...	·701	...	·651	...	·050	...	...	...
IV. CANCER (Malignant Disease), ...	...	·900	...	·932	...	...	...	·032
V. DISEASES OF NERVOUS SYSTEM, ...	...	1·471	...	1·585	...	...	...	·114
VI. ,, CIRCULATORY SYSTEM, ...	...	1·721	...	1·895	...	...	...	·174
VII. ,, RESPIRATORY ,, ...	...	3·062	...	3·231	...	...	...	·169
Pneumonia, ...	1·618	...	1·756	...	...	·138	...	...
Other Respiratory Diseases, ...	1·444	...	1·475	...	...	·031	...	...
VIII. OTHER CAUSES, ...	...	4·521	...	4·543	...	...	...	·022
All Causes, ...	...	16·441	...	16·264	...	...	·177	...
Birth-rate, ...	...	27·513	...	27·802	...	...	...	...
Deaths under 1 year per 1,000 Births, ...	...	136	...	122	...	...	...	...

TABLE XIV.

GLASGOW, 1912.—DEATHS from DIFFERENT DISEASES at several AGE-PERIODS.

DISEASE.	Under 1 Year.	-2 Years.	-5 Years.	-15 Years.	-25 Years.	-45 Years.	-65 Years.	Over 65 Years.	Total.
Smallpox, ...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup, ...	16	35	83	45	2	1	...	...	182
Enteric Fever, ...	...	...	1	4	6	26	3	...	40
Typhus Fever, ...	...	...	...	...	...	2	...	...	2
Scarlet Fever, ...	4	12	32	23	2	...	...	...	73
Cerebro-Spinal Fever, ...	6	6	1	5	1	2	...	...	21
Measles, ...	145	234	127	14	1	...	...	...	521
Whooping-cough, ...	103	89	42	6	...	...	...	1	241
Diarrhoea and Enteritis, ...	250	72	28	9	3	8	11	16	397
Other Digestive Diseases, ...	70	14	14	31	35	82	115	74	435
Puerperal Fever, ...	...	...	...	...	11	39	...	...	50
Erysipelas, ...	13	...	...	...	4	7	16	4	44
Other Septic Diseases, ...	9	3	3	8	3	33	17	7	83
Phthisis (Pulmonary), ...	7	10	25	52	214	478	217	31	1,034
Tubercular Meningitis, ...	58	33	56	49	10	6	1	1	214
Abdominal Tuberculosis, ...	24	30	25	51	11	9	3	1	154
Other Tuberculous Diseases, ...	22	15	15	31	25	20	12	3	143
Cancer, ...	2	...	...	2	6	119	392	210	731
Rheumatic Fever, ...	...	...	...	3	1	2	3	...	9
Meningitis (not Tubercular), ...	51	25	31	23	2	11	7	2	152
Cerebral Hæmorrhage, ...	8	3	...	4	3	48	258	297	621
Other Nervous Diseases, ...	136	50	18	22	21	47	106	70	470
Circulatory Diseases, ...	65	6	8	44	61	219	558	526	1,487
Pneumonia, ...	366	224	133	41	38	172	271	133	1,378
Bronchitis, ...	180	50	26	6	11	54	275	319	921
Other Respiratory Diseases, ...	56	18	4	6	11	44	54	43	236
Croup, ...	16	6	3	2	...	...	2	1	30
Influenza, ...	4	2	1	1	...	7	13	14	42
Violence, ...	49	15	38	42	28	90	109	38	409
Premature Births, ...	458	...	...	...	...	...	...	...	458
Unknown, ...	11	3	3	2	1	10	17	4	51
All others, ...	538	66	44	64	59	255	464	641	2,131
All Causes, ...	2,667	1,021	761	590	570	1,791	2,924	2,436	12,760
Number in 1,000 dying in several Age-Periods, ...	209	80	60	46	45	140	229	191	1,000
1911, ...	228	84	61	50	45	138	208	186	1,000

TABLE XV.

GLASGOW, 1912.—DEATHS under ONE YEAR and DEATH-RATE per 1,000 BIRTHS in each MUNICIPAL WARD, with corresponding RATES for 1903-11.

MUNICIPAL WARDS.	Average of 5 years.	Rate per 1,000 Births.			1912.	
		1903-5.	1906-10.	1911.	Deaths.	Rate per 1,000 Births.
1. Dalarnock, ...	147	143	146	152	207	112
2. Calton, ...	169	176	152	155	177	163
3. Mile-end, ...	149	149	141	159	251	148
4. Whitevale, ...	151	153	146	151	154	151
5. Dennistoun, ...	94	94	91	99	72	79
6. Springburn, ...	134	140	120	117	197	122
7. Cowlairst, ...	119	121	113	130	101	107
8. Townhead, ...	139	140	134	161	135	145
9. Blackfriars, ...	161	166	158	180	109	178
10. Exchange, ...	125	123	169	200	5	200
11. Blythswood, ...	226	257	96	160	...	...
12. Broomielaw, ...	169	167	169	234	20	109
13. Anderston, ...	143	151	135	126	107	122
14. Sandyford, ...	157	146	154	145	64	124
15. Park, ...	85	91	82	85	21	98
16. Cowcaddens, ...	172	182	162	163	128	126
17. Woodside, ...	121	123	114	144	115	108
18. Hutchesontown, ...	134	142	131	140	168	123
19. Gorbals, ...	139	141	137	145	109	130
20. Kingston, ...	145	143	149	145	104	117
21. Govanhill, ...	107	111	105	76	119	106
22. Langside, ...	62	65	59	59	46	58
23. Pollokshields, ...	65	71	57	86	7	46
24. Kelvinside, ...	62	75	47	29	11	43
25. Maryhill, ...	101	110	99	106	121	93
26. Kinning Park, ...	...	...	136	145	64	138
— Institutions and Shipping, ...	...	...	...	...	55	...
CITY, ...	136	139	129	136	2,667	122





TABLE XVII.  
GLASGOW, 1912.—FEMALE INFANT DEATHS at GIVEN AGES and from SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.					AGE IN MONTHS.												TOTALS.	(Group Totals.	Group Percent-ages.	Death-rate per 1,000 Female Births.
	1st	2nd	3rd	4th	Total.	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th					
I. IMMATURETY, (a) Premature Birth, ... (b) Congenital Malformations, ... (c) Atelectasis, ... (d) Atrophy and Debility, ...	146 13 8 30	19 5 2 8	20 3 1 9	10 2 ... 10	195 23 11 57	9 1 ... 26	... 1 ... 11	1 1 8 23	... ... 7 20	... ... 2 22	... ... 1 13	... ... 2 11	... ... 3 10	... ... 3 27	... ... 5 18	... ... ... 32	367 ...				

TABLE XVIII.—GLASGOW, 1912.—ABSTRACT OF NOTIFICATIONS UNDER NOTIFICATION OF BIRTHS ACT, 1907, AND RESULTS OF VISITS, IN EACH MUNICIPAL WARD.

MUNICIPAL WARD.	Total Number of Notifications.	Dr. at Home.	Dr. in Institution.	Institutional Nurse.	Others.	Total Cards issued.	Total Cards returned.	Full Information.	Dr. found in attendance.	Duplicates.	Wrong Address.	Others.
1. Dalmarnock, ...	1,893	514	94	208	1,077	1,379	1,377	1,327	4	2	11	33
2. Calton, ...	1,118	240	57	293	528	878	883	845	2	2	4	30
3. Mile-end, ...	1,743	476	51	255	961	1,267	1,273	1,218	12	5	5	33
4. Whitevale, ...	1,022	288	49	214	471	734	725	709	...	1	4	11
5. Dennistoun, ...	1,001	709	112	71	109	292	293	198	1	1	...	93
6. Springburn, ...	1,770	780	142	241	607	990	970	846	8	3	5	108
7. Cowlands, ...	995	395	34	59	507	600	605	577	9	1	3	15
8. Townhead, ...	973	378	59	301	235	595	586	558	2	...	9	17
9. Blackfriars, ...	640	138	50	256	196	502	515	477	1	3	3	31
10. Exchange, ...	29	13	1	12	3	16	16	15	...	...	...	1
11. Blythswood, ...	31	16	1	5	9	15	15	13	...	...	...	2
12. Broomielaw, ...	192	30	12	91	59	162	162	157	1	...	...	4
13. Anderston, ...	913	342	28	197	346	571	561	544	7	...	1	9
14. Sandyford, ...	555	176	26	175	178	379	375	358	2	1	3	11
15. Park, ...	287	168	71	4	44	119	119	48	6	...	1	64
16. Cowcaddens, ...	1,029	197	54	289	489	832	840	816	4	1	2	17
17. Woodside, ...	1,177	523	91	160	403	654	651	543	14	1	2	91
18. Hutchesontown, ...	1,425	446	41	220	718	979	987	882	16	2	21	66
19. Gorbals, ...	869	279	59	156	375	590	588	545	10	2	6	25
20. Kingston, ...	922	338	32	129	423	584	580	545	12	...	6	17
21. Govanhill, ...	1,135	690	27	64	354	445	448	360	20	1	3	64
22. Langside, ...	798	764	6	1	27	34	35	16	5	...	...	14
23. Pollokshields, ...	167	153	...	...	14	14	14	13	...	...	...	1
24. Kelvinside, ...	273	254	6	...	13	19	19	12	2	...	...	5
25. Maryhill, ...	1,361	771	27	38	525	590	582	555	14	...	2	11
26. Kinning Park, ...	478	135	12	81	250	343	338	317	10	2	...	9
CITY, ...	22,796	9,213	1,142	3,520	8,921	13,583	13,557	12,494	162	28	91	782

TABLE XIX.

GLASGOW, 1912.—TABLE SHOWING THE NUMBER OF LIVE AND STILL-BIRTHS NOTIFIED AND THE NUMBERS  
AND PERCENTAGES ATTENDED MEDICALLY AND NON-MEDICALLY IN EACH WARD.

MUNICIPAL WARDS.	NOTIFICATIONS RECEIVED.			Births Medically Attended.	Medically Attended in Institutions.	Total Births Medically Attended.	Attended by Nurses from Institutions.	Attended by Midwives—Certified and Uncertified.	Total Births not Medically Attended.	Percentage Medically Attended.	Percentage not Medically Attended.
	Total.	Live- Births.	Still- Births.								
1. Dalmarnock, ...	1,891	1,816	75	518	94	612	208	1,071	1,279	32.4	67.6
2. Calton, ...	1,116	1,066	50	242	57	299	293	524	817	26.8	73.2
3. Mile-end, ...	1,738	1,673	65	488	51	539	255	944	1,199	31.0	69.0
4. Whitevale, ...	1,021	985	36	288	49	337	214	470	684	33.0	67.0
5. Dennistoun, ...	1,000	960	40	710	112	822	71	107	178	82.2	17.8
6. Springburn, ...	1,767	1,689	78	788	142	930	241	596	837	52.6	47.4
7. Cowlairs, ...	994	960	34	404	34	438	59	497	556	44.1	55.9
8. Townhead, ...	973	941	32	380	59	439	301	233	534	45.1	54.9
9. Blackfriars, ...	637	600	37	139	50	189	256	192	448	29.7	70.3
10. Exchange, ...	29	27	2	13	1	14	12	3	15	48.3	51.7
11. Blythswood, ...	31	30	1	16	1	17	5	9	14	54.8	45.2
12. Broomielaw, ...	192	183	9	31	12	43	91	58	149	22.4	77.6
13. Anderston, ...	913	874	39	349	28	377	197	339	536	41.3	58.7
14. Sandyford, ...	554	534	20	178	26	204	175	175	350	36.8	63.2
15. Park, ...	287	278	9	174	71	245	4	38	42	85.4	14.6
16. Cowcaddens, ...	1,028	976	52	201	54	255	289	484	773	24.8	75.2
17. Woodside, ...	1,176	1,119	57	537	91	628	160	388	548	53.4	46.6
18. Hutchesontown, ...	1,423	1,363	60	462	41	503	220	700	920	35.3	64.7
19. Gorbals, ...	867	835	32	289	59	348	156	363	519	40.1	59.9
20. Kingston, ...	922	886	36	350	32	382	129	411	540	41.4	58.6
21. Govanhill, ...	1,134	1,100	34	710	27	737	64	333	397	65.0	35.0
22. Langside, ...	798	775	23	769	6	775	1	22	23	97.1	2.9
23. Pollokshields, ...	167	165	2	153	...	153	...	14	14	91.6	8.4
24. Kelvinside, ...	273	269	4	256	6	262	...	11	11	96.0	4.0
25. Maryhill, ...	1,361	1,306	55	785	27	812	38	511	549	59.7	40.3
26. Kinning Park, ...	476	459	17	145	12	157	81	238	319	33.0	67.0
CITY, ...	22,768	21,869	899	9,375	1,142	10,517	3,520	8,731	12,251	46.2	53.8



TABLE XX.

GLASGOW, 1912.—TABLE SHOWING NUMBER OF LIVE-BIRTHS AND STILL-BIRTHS NOTIFIED, WITH PROPORTIONS MEDICALLY AND NON-MEDICALLY ATTENDED IN EACH WARD.

MUNICIPAL WARDS.	Number of Live-Births Notified.	Number of Still-Births Notified.	Per-centage Still-Births to Live-Births Notified.	Live-Births Medically Attended, but excluding Institutions.	Still-Births Medically Attended, but excluding Institutions.	Per-centage Still-Births to Live-Births Medically Attended.	Live-Births Non-Medically Attended.	Still-Births Non-Medically Attended.	Per-centage Still-Births to Live-Births Non-Medically Attended.
1. Dalmarnock, ...	1,816	75	4.1	518	22	4.2	1,279	33	2.6
2. Calton, ...	1,066	50	4.7	242	13	5.4	817	27	3.3
3. Mile-end, ...	1,673	65	3.9	488	20	4.1	1,199	36	3.0
4. Whitevale, ...	985	36	3.7	288	6	2.1	684	20	2.9
5. Dennistoun, ...	960	40	4.2	710	21	2.9	178	5	2.8
6. Springburn, ...	1,689	78	4.6	788	26	3.3	837	29	3.5
7. Cowlares, ...	960	34	3.5	404	11	2.7	556	17	3.1
8. Townhead, ...	941	32	3.4	380	12	3.2	534	11	2.1
9. Blackfriars, ...	600	37	6.2	139	7	5.0	448	20	4.5
10. Exchange, ...	27	2	7.4	13	1	7.7	15	1	6.7
11. Blythswood, ...	30	1	3.3	16	...	...	14	1	7.1
12. Broomielaw, ...	183	9	4.9	31	2	6.5	149	4	2.7
13. Anderston, ...	874	39	4.5	349	15	4.3	536	18	3.4
14. Sandyford, ...	534	20	3.7	178	7	3.9	350	12	3.4
15. Park, ...	278	9	3.2	174	4	2.3	42	1	2.4
16. Cowcaddens, ...	976	52	5.3	201	10	5.0	773	35	4.5
17. Woodside, ...	1,119	57	5.1	537	30	5.6	548	16	2.9
18. Hutchesontown, ...	1,363	60	4.4	462	23	5.0	920	28	3.0
19. Gorbals, ...	835	32	3.8	289	11	3.8	519	12	2.3
20. Kingston, ...	886	36	4.1	350	15	4.3	540	18	3.3
21. Govanhill, ...	1,100	34	3.1	710	24	3.4	397	5	1.3
22. Langside, ...	775	23	3.0	769	21	2.7	23	...	...
23. Pollokshields, ...	165	2	1.2	153	2	1.3	14	...	...
24. Kelvinside, ...	269	4	1.5	256	3	1.2	11	1	9.1
25. Maryhill, ...	1,306	55	4.2	785	33	4.2	549	15	2.7
26. Kinning Park, ...	459	17	3.7	145	8	5.5	319	8	2.5
CITY, ...	21,869	899	4.1	9,375	347	3.7	12,251	373	3.0

TABLE XXI.

GLASGOW, 1912.—CASES OF CERTAIN ZYMOTICS, PHTHISIS, and ALL CASES registered in each MUNICIPAL WARD.

MUNICIPAL WARDS.	FEVERS.						Smallpox.	Diphtheria and Membranous Group.	Phtisis.	All other Cases.	TOTAL.
	Cerebro-Spinal.	Typhus.	Enteric.	Continued and Undefined.	Puerperal.	Scarlet.					
1. Dalmarnock, ...	6	2	9	...	18	174	...	153	175	1,329	1,866
2. Calton, ...	1	...	18	...	5	136	...	53	144	1,098	1,455
3. Mile-end, ...	1	1	18	...	9	258	...	105	142	1,654	2,188
4. Whitevale, ...	1	...	11	...	6	150	...	49	103	1,147	1,467
5. Dennistoun, ...	...	...	4	6	5	172	...	109	63	1,011	1,370
6. Springburn, ...	2	1	11	...	15	177	...	130	122	1,764	2,222
7. Cowlares, ...	...	...	6	...	3	102	...	97	58	1,014	1,280
8. Townhead, ...	...	...	12	...	8	101	...	88	108	981	1,298
9. Blackfriars, ...	1	6	6	...	9	65	...	44	77	502	710
10. Exchange, ...	...	...	...	...	...	2	...	5	5	32	44
11. Blythswood, ...	1	...	...	...	2	9	...	4	7	25	48
12. Broomielaw, ...	...	1	1	...	1	17	...	9	23	310	362
13. Anderston, ...	...	...	8	4	3	62	...	42	84	1,775	1,978
14. Sandyford, ...	1	...	3	...	3	74	...	39	60	787	967
15. Park, ...	...	...	7	...	1	74	...	79	33	293	487
16. Cowcaddens, ...	1	...	20	...	8	60	...	107	155	1,001	1,352
17. Woodside, ...	...	...	17	...	5	137	...	150	92	1,181	1,582
18. Hutchesontown, ...	...	13	10	...	8	138	...	67	121	1,527	1,884
19. Gorbals, ...	2	4	20	...	1	116	...	32	75	688	938
20. Kingston, ...	1	3	10	...	9	121	...	51	105	736	1,036
21. Govanhill, ...	...	2	7	...	5	204	...	62	73	1,172	1,525
22. Langside, ...	1	1	4	...	3	208	...	94	69	569	949
23. Pollokshields, ...	...	...	22	...	1	51	...	21	19	174	288
24. Kelvinside, ...	...	...	2	...	...	61	...	37	24	263	387
25. Maryhill, ...	...	...	12	...	12	168	...	92	107	1,824	2,233
26. Kinning Park, ...	...	...	6	1	2	38	...	16	29	136	228
— Institutions, ...	...	...	...	...	...	...	...	...	266	...	266
— Harbour, ...	...	...	...	...	...	...	...	...	1	...	1
CITY, ...	19	34	244	11	142	2,893	...	1,735	2,340	22,993	30,411

\* Erysipelas, Measles, Whooping-cough, Chickenpox, Beri-Beri, Trachoma, British Cholera, Dysentery, Anthrax, Mumps, and Ophthalmia Neonatorum.

NOTE.—Cases occurring in Institutions are allocated to the respective Wards, except for Phtisis.

TABLE XXII.

GLASGOW, 1912.—CASE-RATE per Million for CERTAIN ZYBOTICS, PHTHISIS, and for ALL CASES registered in each MUNICIPAL WARD.

MUNICIPAL WARDS.	FEVERS.						Smallpox.	Diphtheria and Membranous Group.	Phthisis.	All other Cases.	TOTAL.
	Cerebro-Spinal.	Typhus.	Enteric.	Continued and Undefined.	Puerperal.	Scarlet.					
1. Dalmarnock ...	116	39	173	...	347	3,352	...	2,948	3,372	25,606	35,953
2. Calton, ...	27	...	487	...	135	3,677	...	1,433	3,894	29,690	39,343
3. Mile-end, ...	21	21	387	...	193	5,544	...	2,256	3,051	35,540	47,013
4. Whitevale, ...	30	...	335	...	183	4,572	...	1,494	3,140	34,963	44,717
5. Dennistoun, ...	...	...	102	153	127	4,379	...	2,775	1,604	25,742	34,882
6. Springburn, ...	41	20	224	...	305	3,605	...	2,648	2,485	35,926	45,254
7. Cowlairst, ...	...	...	200	...	100	3,402	...	3,235	1,934	33,816	42,687
8. Townhead, ...	...	...	339	...	226	2,849	...	2,482	3,047	27,674	36,617
9. Blackfriars, ...	48	291	291	...	436	3,150	...	2,132	3,731	24,324	34,403
10. Exchange, ...	...	...	...	...	...	876	...	2,190	2,190	14,017	19,273
11. Blythswood, ...	346	...	...	...	692	3,115	...	1,385	2,423	8,654	16,615
12. Broomielaw, ...	...	123	123	...	123	2,099	...	1,111	2,840	38,276	44,695
13. Anderston, ...	...	...	274	137	103	2,125	...	1,439	2,879	60,827	67,784
14. Sandyford, ...	42	...	127	...	127	3,121	...	1,645	2,531	33,194	40,787
15. Park, ...	...	...	300	...	43	3,176	...	3,391	1,416	12,575	20,901
16. Cowcaddens, ...	29	...	573	...	229	1,720	...	3,068	4,444	28,699	38,762
17. Woodside, ...	...	...	412	...	121	3,324	...	3,639	2,232	28,652	38,380
18. Hutchesontown, ...	...	333	256	...	205	3,534	...	1,716	3,099	39,103	48,246
19. Gorbals, ...	60	119	597	...	29	3,463	...	955	2,239	20,540	28,002
20. Kingston, ...	30	91	303	...	273	3,666	...	1,545	3,181	22,299	31,388
21. Govanhill, ...	...	56	195	...	139	5,672	...	1,724	2,030	32,586	42,402
22. Langside, ...	24	24	97	...	73	5,053	...	2,284	1,676	13,823	23,054
23. Pollokshields, ...	...	...	1,248	...	57	2,894	...	1,192	1,078	9,873	16,342
24. Kelvinside, ...	...	...	91	...	...	2,760	...	1,674	1,086	11,902	17,513
25. Maryhill, ...	...	...	292	...	292	4,514	...	2,233	2,597	44,269	54,197
26. Kinning Park, ...	...	...	472	79	157	2,990	...	1,259	2,282	10,700	17,939
CITY, ...	24	43	311	14	181	3,687	...	2,211	2,983	29,307	38,761

\* Erysipelas, Measles, Whooping-cough, Chickenpox, Beri-Beri, Plague, Mumps, and Ophthalmia Neonatorum.  
NOTE.—The populations on which these rates are based include Institutions and Shipping, except for Phthisis.

TABLE XXIII.

GLASGOW, 1912.—\*PRINCIPAL ZYBOTIC DISEASES.—DEATHS AND DEATH-RATES IN THE SEVERAL WARDS, WITH CORRESPONDING RATES FOR 1903-11.

MUNICIPAL WARDS.	Rate per Million.			1912.	
	1903-5.	1906-10.	1911.	Deaths.	Rate per Million.
1. Dalmarnock, ...	3,739	3,924	4,691	123	2,401
2. Calton, ...	3,611	3,361	2,958	98	2,832
3. Mile-end, ...	3,664	3,619	5,103	151	3,281
4. Whitevale, ...	2,889	3,134	2,695	110	3,489
5. Dennistoun, ...	1,587	962	1,049	43	1,148
6. Springburn, ...	3,041	2,723	2,768	103	2,307
7. Cowlairst, ...	2,372	2,432	2,581	46	1,535
8. Townhead, ...	2,317	2,350	2,468	75	2,123
9. Blackfriars, ...	2,806	3,249	3,106	45	2,320
10. Exchange, ...	912	1,226	2,990	1	655
11. Blythswood, ...	1,149	252	2,147	...	...
12. Broomielaw, ...	3,800	3,684	3,702	17	2,776
13. Anderston, ...	3,153	3,307	2,163	64	2,305
14. Sandyford, ...	2,526	2,243	1,993	53	2,269
15. Park, ...	679	588	628	12	539
16. Cowcaddens, ...	3,382	3,384	3,363	66	1,965
17. Woodside, ...	1,909	1,963	2,209	71	1,732
18. Hutchesontown, ...	3,337	3,722	2,829	106	2,716
19. Gorbals, ...	2,006	2,624	2,258	44	1,349
20. Kingston, ...	2,436	2,669	3,336	41	1,276
21. Govanhill, ...	2,061	2,304	2,052	52	1,447
22. Langside, ...	738	591	489	23	568
23. Pollokshields, ...	479	269	466	8	454
24. Kelvinside, ...	535	262	456	2	94
25. Maryhill, ...	2,000	2,104	1,624	60	1,512
26. Kinning Park, ...	...	2,864	3,582	13	1,023
— Institutions and Harbour, ...	...	...	...	50	...
CITY, ...	2,486	2,450	2,544	1,477	1,883

\* Includes Smallpox, Diphtheria, Membranous Croup, Scarlet Fever, Typhus Fever, Enteric Fever, Continued and Undefined Fevers, Cerebro-Spinal Fever, Measles, Whooping-cough, and Diarrhoea.

TABLE XXIV.

GLASGOW.—PRIMARY VACCINATION during 1911—COMPILED from the 57TH ANNUAL REPORT of the REGISTRAR-GENERAL.

Registration Districts.	Successfully Vaccinated.		Vaccination Postponed.		Insusceptible of Vaccination.		Died before Vaccination.		Statutory Declaration of Conscientious Objection.		Removed from District, or otherwise Unaccounted for		Total Births for 1911.
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	
1902, ... ..	...	84.2	...	0.8	...	0.9	...	10.6	...	...	...	3.5	24,720
1903, ... ..	...	84.6	...	0.7	...	0.6	...	10.8	...	...	...	3.3	25,142
1904, ... ..	...	83.4	...	1.2	...	0.7	...	11.0	...	...	...	3.7	24,751
1905, ... ..	...	84.5	...	1.3	...	0.6	...	10.0	...	...	...	3.6	24,315
1906, ... ..	...	82.9	...	0.8	...	0.5	...	10.6	...	0.2	...	5.0	24,557
1907, ... ..	...	75.0	...	1.5	...	0.7	...	10.7	...	4.9	...	7.2	24,003
1908, ... ..	...	69.5	...	1.7	...	0.8	...	10.8	...	9.2	...	8.0	23,912
1909, ... ..	...	67.2	...	1.7	...	0.8	...	10.6	...	12.6	...	7.1	23,135
1910, ... ..	...	64.8	...	1.6	...	0.5	...	9.8	...	16.0	...	7.3	22,216

Figures for 1911 not yet available.

TABLE XXV.

GLASGOW.—STATUTORY DECLARATIONS OF CONSCIENTIOUS OBJECTION TO VACCINATION in each Ward from 1908 to 1912.

MUNICIPAL WARDS.	1908.	1909.	1910.	1911.	1912.	TOTAL.
1. Dalmarnock, ... ..	126	195	223	306	395	1,245
2. Calton, ... ..	54	70	109	96	139	468
3. Mile end, ... ..	112	156	261	299	321	1,149
4. Whitevale, ... ..	61	86	113	144	145	549
5. Dennistoun, ... ..	119	119	152	172	203	765
6. Springburn, ... ..	253	336	394	344	438	1,765
7. Cowlares, ... ..	183	210	214	243	286	1,136
8. Townhead, ... ..	97	145	165	149	171	727
9. Blackfriars, ... ..	41	27	39	63	62	232
10. Exchange, ... ..	...	3	4	2	3	12
11. Blythswood, ... ..	2	5	3	4	8	22
12. Brooniellaw, ... ..	7	13	14	11	15	60
13. Anderston, ... ..	72	98	92	110	119	491
14. Sandyford, ... ..	35	38	52	74	77	276
15. Park, ... ..	22	16	35	30	50	153
16. Cowcaddens, ... ..	64	73	90	118	128	473
17. Woodside, ... ..	169	176	211	234	263	1,053
18. Hutchesontown, ... ..	90	140	177	272	293	972
19. Gorbals, ... ..	71	73	86	95	131	456
20. Kingston, ... ..	86	101	125	166	214	692
21. Govanhill, ... ..	174	196	207	244	246	1,067
22. Langside, ... ..	127	95	119	130	177	648
23. Pollokshields, ... ..	14	17	22	34	28	115
24. Kelvinside, ... ..	28	20	28	39	23	138
25. Maryhill, ... ..	127	164	193	267	304	1,055
26. Kinning Park, ... ..	49	81	103	145	132	510
CITY, ... ..	2,183	2,653	3,231	3,791	4,371	16,229



TABLE XXVI.

GLASGOW, 1912.—DIPHTHERIA and MEMBRANOUS CROUP.—CASES and CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding Death-rates for 1903-11.

MUNICIPAL WARDS.	Death-rates per Million.			1912.			
	1903-5.	1906-10.	1911.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	146	327	391	153	2,948	15	293
2. Calton, ...	131	240	341	53	1,433	7	202
3. Mile-end, ...	131	264	504	105	2,256	16	348
4. Whitevale, ...	120	262	251	49	1,494	3	95
5. Dennistoun, ...	109	96	166	109	2,775	14	374
6. Springburn, ...	119	304	201	130	2,648	12	269
7. Cowlairs, ...	176	183	374	97	3,235	5	167
8. Townhead, ...	93	189	137	88	2,482	16	453
9. Blackfriars, ...	59	214	301	44	2,132	5	258
10. Exchange, ...	...	109	...	5	2,190	...	...
11. Blythswood, ...	...	129	716	4	1,385	...	...
12. Broomielaw, ...	124	200	148	9	1,111	...	...
13. Anderston, ...	227	225	216	42	1,439	6	216
14. Sandyford, ...	154	230	170	39	1,645	5	214
15. Park, ...	40	49	134	79	3,391	2	90
16. Cowcaddens, ...	180	222	236	107	3,068	10	298
17. Woodside, ...	125	173	388	150	3,639	23	561
18. Hutchesontown, ...	154	296	50	67	1,716	8	205
19. Gorbals, ...	137	280	30	32	955	3	92
20. Kingston, ...	153	203	184	51	1,545	7	218
21. Govanhill, ...	79	324	114	62	1,724	6	169
22. Langside, ...	134	99	103	94	2,284	2	49
23. Pollokshields, ...	37	...	58	21	1,192	1	57
24. Kelvinside, ...	68	17	51	37	1,674	2	94
25. Maryhill, ...	194	164	330	92	2,233	10	252
26. Kinning Park, ...	...	228	...	16	1,259	3	236
— Institutions and Harbour, ...	...	...	...	...	...	1	...
CITY, ...	128	205	221	1,735	2,211	182	232

TABLE XXVII.

GLASGOW, 1912.—ENTERIC FEVER, CASES AND CASE-RATES, AND DEATHS AND DEATH-RATES, IN EACH MUNICIPAL WARD, WITH CORRESPONDING DEATH-RATES FOR 1903-11.

MUNICIPAL WARDS.	Death-rates per Million.			1912.			
	1903-5.	1906-10.	1911.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	159	137	20	9	173	2	39
2. Calton, ...	147	136	85	18	487	2	58
3. Mile-end, ...	178	76	153	18	387	...	...
4. Whitevale, ...	169	125	...	11	335	2	63
5. Dennistoun, ...	148	60	28	4	102	1	27
6. Springburn, ...	103	72	67	11	224	4	90
7. Cowlairs, ...	88	85	...	6	200	3	100
8. Townhead, ...	135	70	110	12	339	1	28
9. Blackfriars, ...	146	152	100	6	291	1	52
10. Exchange, ...	149	98	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...	...	...
12. Broomielaw, ...	83	230	148	1	123	...	...
13. Anderston, ...	159	140	108	8	274	...	...
14. Sandyford, ...	64	148	42	3	127	1	43
15. Park, ...	53	65	45	7	300	...	...
16. Cowcaddens, ...	229	143	207	20	573	5	149
17. Woodside, ...	89	37	73	17	412	5	122
18. Hutchesontown, ...	201	164	100	10	256	3	77
19. Gorbals, ...	91	112	90	20	597	...	...
20. Kingston, ...	96	96	61	10	303	2	62
21. Govanhill, ...	50	96	114	7	195	3	83
22. Langside, ...	32	14	26	4	97	...	...
23. Pollokshields, ...	39	45	...	22	1,248	2	113
24. Kelvinside, ...	34	88	...	2	91	...	...
25. Maryhill, ...	71	50	25	12	292	2	50
26. Kinning Park, ...	...	169	78	6	472	...	...
— Institutions and Harbour, ...	...	...	...	...	...	1	...
CITY, ...	119	98	75	244	311	40	51

TABLE XXVIII.

GLASGOW, 1912.—CEREBRO-SPINAL FEVER.—CASES AND CASE-RATES, with DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding DEATH-RATES for 1906-11.

MUNICIPAL WARDS.	Death-rate per Million.		1912.			
	1906-10.	1911.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalrnarnock, ... ..	361	195	6	116	5	98
2. Calton, ... ..	479	114	1	27	2	58
3. Mile-end, ... ..	498	66	1	21	2	43
4. Whitevale, ... ..	407	63	1	30	3	95
5. Dennistoun, ... ..	190	55	...	...	...	...
6. Springburn, ... ..	384	89	2	41	2	45
7. Cowlairst, ... ..	190	...	...	...	...	...
8. Townhead, ... ..	293	27	...	...	1	28
9. Blackfriars, ... ..	429	50	1	48	...	...
10. Exchange, ... ..	295	...	...	...	...	...
11. Blythswood, ... ..	61	...	1	346	...	...
12. Broomielaw, ... ..	439	...	...	...	...	...
13. Anderston, ... ..	354	72	...	...	...	...
14. Sandyford, ... ..	210	85	1	42	1	43
15. Park, ... ..	65	...	...	...	...	...
16. Cowcaddens, ... ..	249	29	1	29	1	30
17. Woodside, ... ..	222	24	...	...	...	...
18. Hutchesontown, ... ..	254	50	...	...	...	...
19. Gorbals, ... ..	185	90	2	60	2	61
20. Kingston, ... ..	319	92	1	30	1	31
21. Govanhill, ... ..	167	29	...	...	...	...
22. Langside, ... ..	53	...	1	24	1	25
23. Pollokshields, ... ..	32	...	...	...	...	...
24. Kelvinside, ... ..	26	51	...	...	...	...
25. Maryhill, ... ..	249	25	...	...	...	...
26. Kinning Park, ... ..	241	...	...	...	...	...
— Institutions and Harbour, ... ..	...	...	...	...	...	...
CITY, ... ..	263	59	19	24	21	27

TABLE XXIX.

GLASGOW, 1912.—TYPHUS FEVER.—CASES AND CASE-RATES and DEATHS and DEATH-RATES in each MUNICIPAL WARD, with corresponding rates for 1903-11.

MUNICIPAL WARDS.	Death-rate per Million.			1912.			
	1903-5.	1906-10.	1911.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalrnarnock, ... ..	34	4	...	2	39	...	...
2. Calton, ... ..	35	...	28	...	...	...	...
3. Mile-end, ... ..	23	4	...	1	21	...	...
4. Whitevale, ... ..	...	...	31	...	...	...	...
5. Dennistoun, ... ..	9	...	...	...	...	...	...
6. Springburn, ... ..	16	4	...	1	20	...	...
7. Cowlairst, ... ..	11	...	...	...	...	...	...
8. Townhead, ... ..	...	...	...	...	...	...	...
9. Blackfriars, ... ..	15	...	...	6	291	...	...
10. Exchange, ... ..	...	...	...	...	...	...	...
11. Blythswood, ... ..	...	...	...	...	...	...	...
12. Broomielaw, ... ..	...	...	...	1	123	...	...
13. Anderston, ... ..	11	...	...	...	...	...	...
14. Sandyford, ... ..	...	...	...	...	...	...	...
15. Park, ... ..	...	...	...	...	...	...	...
16. Cowcaddens, ... ..	...	...	29	...	...	...	...
17. Woodside, ... ..	...	5	...	...	...	...	...
18. Hutchesontown, ... ..	8	...	...	13	333	1	26
19. Gorbals, ... ..	18	6	...	4	119	...	...
20. Kingston, ... ..	29	...	...	3	91	...	...
21. Govanhill, ... ..	...	...	...	2	56	...	...
22. Langside, ... ..	11	...	...	1	24	...	...
23. Pollokshields, ... ..	...	...	...	...	...	...	...
24. Kelvinside, ... ..	...	...	...	...	...	...	...
25. Maryhill, ... ..	...	20	...	...	...	...	...
26. Kinning Park, ... ..	...	...	...	...	...	...	...
— Institutions and Harbour, ... ..	...	...	...	...	...	1	...
CITY, ... ..	11	2	4	34	43	2	3

TABLE XXX.

GLASGOW, 1912.—SCARLET FEVER.—CASES AND CASE-RATES, WITH DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, ALSO DEATH-RATES FOR 1903-11.

MUNICIPAL WARDS.	Death-rate per Million.			1912.			
	1903-5.	1906-10.	1911.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	60	198	293	174	3,352	5	98
2. Calton, ...	98	109	114	136	3,677	3	87
3. Mile-end, ...	108	211	197	258	5,544	8	174
4. Whitevale, ...	129	206	63	150	4,572	8	254
5. Dennistoun, ...	132	91	55	172	4,379	2	53
6. Springburn, ...	80	186	268	177	3,605	10	224
7. Cowlairs, ...	77	105	68	102	3,402	2	67
8. Townhead, ...	34	146	110	101	2,849	5	142
9. Blackfriars, ...	88	96	50	65	3,150	3	155
10. Exchange, ...	...	...	...	2	876	...	...
11. Blythswood, ...	...	...	...	9	3,115	...	...
12. Broomielaw, ...	40	116	...	17	2,099	...	...
13. Anderston, ...	103	176	72	62	2,125	...	...
14. Sandyford, ...	52	66	127	74	3,121	2	86
15. Park, ...	80	58	...	74	3,176	1	45
16. Cowcaddens, ...	17	132	88	60	1,720	1	30
17. Woodside, ...	88	89	49	137	3,324	2	49
18. Hutchesontown, ...	89	154	25	138	3,534	3	77
19. Gorbals, ...	119	124	90	116	3,463	3	92
20. Kingston, ...	96	78	184	121	3,666	2	62
21. Govanhill, ...	138	114	143	204	5,672	4	111
22. Langside, ...	52	62	51	208	5,053	4	99
23. Pollokshields, ...	58	31	...	51	2,894	1	57
24. Kelvinside, ...	34	17	101	61	2,760	...	...
25. Maryhill, ...	36	124	76	186	4,514	3	76
26. Kinning Park, ...	...	78	78	38	2,990	...	...
— Institutions and Harbour, ...	...	...	...	...	...	1	...
CITY, ...	79	121	116	2,893	3,687	73	93

TABLE XXXI.

GLASGOW, 1912.—MEASLES.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, WITH CORRESPONDING RATES FOR 1903-11.

MUNICIPAL WARDS.	Death-rate per Million.			1913.	
	1903-5.	1906-10.	1911.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	627	812	1,192	36	702
2. Calton, ...	740	825	256	43	1,242
3. Mile-end, ...	841	796	701	50	1,086
4. Whitevale, ...	542	697	251	58	1,840
5. Dennistoun, ...	225	200	110	15	401
6. Springburn, ...	872	651	268	47	1,052
7. Cowlairs, ...	513	720	679	11	367
8. Townhead, ...	550	590	137	23	651
9. Blackfriars, ...	534	978	601	15	773
10. Exchange, ...	149	417	1,196	1	655
11. Blythswood, ...	193	...	...	...	...
12. Broomielaw, ...	707	1,104	...	15	2,449
13. Anderston, ...	442	857	36	39	1,405
14. Sandyford, ...	540	622	85	20	856
15. Park, ...	133	106	45	3	135
16. Cowcaddens, ...	646	1,037	502	16	476
17. Woodside, ...	415	480	340	11	268
18. Hutchesontown, ...	764	1,067	501	52	1,332
19. Gorbals, ...	468	737	301	13	399
20. Kingston, ...	634	743	918	8	249
21. Govanhill, ...	414	545	427	19	523
22. Langside, ...	84	80	...	4	99
23. Pollokshields, ...	97	43	58	2	113
24. Kelvinside, ...	50	44	...	...	...
25. Maryhill, ...	402	521	25	15	378
26. Kinning Park, ...	...	1,007	545	3	236
— Institutions and Harbour, ...	...	...	...	2	...
CITY, ...	520	634	375	521	664



TABLE XXXII.

GLASGOW, 1912.—WHOOPIING-COUGH.—DEATHS AND DEATH-RATES in each MUNICIPAL WARD, with Corresponding Rates for 1903-11.

MUNICIPAL WARDS.	Death-rate per Million.			1912.	
	1903-5.	1906-10.	1911.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,102	1,249	1,466	12	234
2. Calton, ...	990	783	996	13	376
3. Mile-end, ...	1,017	934	1,336	34	739
4. Whitevale, ...	915	890	971	15	476
5. Dennistoun, ...	572	328	414	2	53
6. Springburn, ...	991	666	960	10	224
7. Cowlares, ...	825	694	747	9	300
8. Townhead, ...	743	636	932	13	368
9. Blackfriars, ...	830	827	702	6	309
10. Exchange, ...	315	211	1,196	...	...
11. Blythswood, ...	284	...	358	...	...
12. Broomielaw, ...	1,244	1,021	1,629	2	327
13. Anderston, ...	851	1,049	541	8	288
14. Sandyford, ...	834	670	509	13	556
15. Park, ...	133	155	45	...	...
16. Cowcaddens, ...	1,197	1,009	1,210	11	327
17. Woodside, ...	658	706	534	13	317
18. Hutchesontown, ...	1,300	1,216	1,277	23	589
19. Gorbals, ...	632	778	874	9	276
20. Kingston, ...	671	732	1,071	8	249
21. Govanhill, ...	749	777	798	10	278
22. Langside, ...	176	183	103	7	173
23. Pollokshields, ...	57	65	58	1	57
24. Kelvinside, ...	131	51	51	...	...
25. Maryhill, ...	560	636	457	19	479
26. Kinning Park, ...	...	773	1,635	3	236
— Institutions and Harbour, ...	...	...	...	...	...
CITY, ...	765	699	797	241	307

TABLE XXXIII.

GLASGOW, 1912.—DIARRHEAL DISEASES.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, with Corresponding Rates for 1903-11.

MUNICIPAL WARDS.	Death-rate per Million.			1912.	
	1903-5.	1906-10.	1911.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,481	838	1,134	48	937
2. Calton, ...	1,435	790	1,024	28	809
3. Mile-end, ...	1,281	836	2,146	41	891
4. Whitevale, ...	963	549	1,065	21	666
5. Dennistoun, ...	393	197	221	9	240
6. Springburn, ...	836	456	915	18	403
7. Cowlares, ...	659	455	713	16	534
8. Townhead, ...	728	445	1,015	16	453
9. Blackfriars, ...	1,104	553	1,302	15	773
10. Exchange, ...	149	96	592	...	...
11. Blythswood, ...	673	61	1,073	...	...
12. Broomielaw, ...	1,481	573	1,777	...	...
13. Anderston, ...	1,327	508	1,118	11	396
14. Sandyford, ...	819	297	975	11	471
15. Park, ...	240	90	359	6	269
16. Cowcaddens, ...	1,094	592	1,062	22	655
17. Woodside, ...	519	250	801	17	415
18. Hutchesontown, ...	758	370	826	16	410
19. Gorbals, ...	503	401	783	14	429
20. Kingston, ...	728	497	826	13	405
21. Govanhill, ...	603	282	427	10	278
22. Langside, ...	249	100	206	5	123
23. Pollokshields, ...	190	54	292	1	57
24. Kelvinside, ...	218	18	202	...	...
25. Maryhill, ...	741	340	686	11	277
26. Kinning Park, ...	...	368	1,246	4	315
— Institutions and Harbour, ...	...	...	...	44	...
CITY, ...	824	428	897	397	506

TABLE XXXIV.

GLASGOW, 1912.—PHTHISIS.—CASES AND CASE-RATES, WITH DEATHS AND DEATH-RATES in each MUNICIPAL WARD, with Corresponding Death-rates for 1903-11.

MUNICIPAL WARDS.	Death-rates per Million.			1912.			
	1903-5.	1906-10.	1911.	Cases.	Case-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,357	1,316	1,192	175	3,372	61	1,190
2. Calton, ...	2,000	1,902	1,935	144	3,894	53	1,531
3. Mile-end, ...	1,797	1,484	1,402	142	3,051	62	1,347
4. Whitevale, ...	1,592	1,487	1,597	103	3,140	38	1,205
5. Dennistoun, ...	1,026	829	718	63	1,604	21	561
6. Springburn, ...	1,526	1,450	1,339	122	2,485	55	1,231
7. Cowlairst, ...	1,098	1,179	781	58	1,934	24	801
8. Townhead, ...	1,378	1,302	1,371	108	3,047	38	1,076
9. Blackfriars, ...	2,195	1,762	1,403	77	3,731	37	1,906
10. Exchange, ...	1,359	988	1,196	5	2,190	3	1,966
11. Blythswood, ...	1,316	321	358	7	2,423	1	421
12. Broomielaw, ...	1,830	1,563	1,037	23	2,840	11	1,796
13. Anderston, ...	1,374	1,406	1,479	84	2,879	38	1,369
14. Sandyford, ...	1,205	1,240	1,144	60	2,531	18	770
15. Park, ...	652	616	672	33	1,416	16	718
16. Cowcaddens, ...	1,600	1,915	1,858	155	4,444	73	2,173
17. Woodside, ...	1,104	1,159	1,019	92	2,232	38	927
18. Hutchesontown, ...	1,659	1,374	1,327	121	3,099	61	1,563
19. Gorbals, ...	1,565	1,280	1,205	75	2,239	31	951
20. Kingston, ...	1,687	1,389	1,071	105	3,181	34	1,060
21. Govanhill, ...	1,242	1,100	827	73	2,030	35	973
22. Langside, ...	635	587	514	69	1,676	33	814
23. Pollokshields, ...	380	579	233	19	1,078	7	397
24. Kelvinside, ...	339	261	303	24	1,086	7	330
25. Maryhill, ...	1,054	1,174	788	107	2,597	52	1,311
26. Kinning Park, ...	...	1,474	779	29	2,282	13	1,023
— Institutions and Harbour, ...	...	...	...	267	...	174	...
CITY, ...	1,564	1,440	1,305	2,340	2,983	1,034	1,318

TABLE XXXV.

GLASGOW, 1912.—TUBERCULOUS DISEASES other than PHTHISIS.—DEATHS AND DEATH-RATES IN EACH MUNICIPAL WARD, WITH CORRESPONDING RATES FOR 1903-11.

MUNICIPAL WARDS.	Death-rates per Million.			1912.	
	1903-5.	1906-10.	1911.	Deaths.	Death-rate per Million
1. Dalmarnock, ...	1,492	1,389	899	35	683
2. Calton, ...	1,493	1,280	655	30	866
3. Mile-end, ...	1,543	1,412	788	41	891
4. Whitevale, ...	1,523	1,236	658	32	1,016
5. Dennistoun, ...	1,063	776	414	12	320
6. Springburn, ...	1,218	1,241	870	45	1,007
7. Cowlairst, ...	1,174	1,195	884	22	734
8. Townhead, ...	1,421	1,265	714	18	510
9. Blackfriars, ...	1,002	1,029	853	14	722
10. Exchange, ...	911	1,147	1,196	...	...
11. Blythswood, ...	677	384	...	...	...
12. Broomielaw, ...	821	1,359	740	8	1,307
13. Anderston, ...	1,327	1,124	686	14	504
14. Sandyford, ...	884	968	721	17	727
15. Park, ...	333	312	582	4	180
16. Cowcaddens, ...	1,428	1,040	855	33	982
17. Woodside, ...	969	652	729	23	561
18. Hutchesontown, ...	1,434	1,084	700	19	487
19. Gorbals, ...	1,018	904	513	19	583
20. Kingston, ...	1,150	1,137	673	27	842
21. Govanhill, ...	1,104	959	456	21	584
22. Langside, ...	439	462	335	3	75
23. Pollokshields, ...	476	213	525	3	170
24. Kelvinside, ...	234	301	51	1	47
25. Maryhill, ...	1,002	836	712	23	579
26. Kinning Park, ...	...	1,285	702	14	1,102
— Institutions and Harbour, ...	...	...	...	33	...
CITY, ...	1,159	1,007	701	511	651

TABLE XXXVI.  
GLASGOW, 1912.—RESPIRATORY DISEASES (including CROUP).—DEATHS and DEATH-RATES  
in each MUNICIPAL WARD, with Corresponding Rates for 1903-11.

MUNICIPAL WARDS.	Death-rate per Million.			1912.			
				Excluding Pneumonia.		Total, Including Pneumonia.	
	1903-5.	1906-10.	1911.	Deaths.	Death-rate per Million	Deaths.	Death-rate per Million
1. Dalmarnock, ...	4,254	4,030	3,558	86	1,678	172	3,356
2. Calton, ...	4,891	4,691	3,586	75	2,167	165	4,767
3. Mile-end, ...	4,381	4,135	3,505	87	1,891	190	4,128
4. Whitevale, ...	4,071	3,468	3,131	50	1,586	100	3,172
5. Dennistoun, ...	2,083	2,028	1,768	31	828	66	1,763
6. Springburn, ...	3,962	3,461	2,789	63	1,410	150	3,357
7. Cowlairs, ...	3,501	2,752	3,092	30	1,002	78	2,605
8. Townhead, ...	4,132	3,663	3,044	62	1,755	124	3,510
9. Blackfriars, ...	5,590	5,205	4,110	39	2,010	97	4,999
10. Exchange, ...	3,497	2,976	2,990	2	1,311	4	2,622
11. Blythswood, ...	2,284	1,808	1,074	4	1,685	7	2,949
12. Broomielaw, ...	4,951	5,851	6,220	16	2,612	29	4,734
13. Anderston, ...	3,640	3,745	3,499	54	1,946	104	3,748
14. Sandyford, ...	3,500	3,567	2,713	36	1,541	73	3,124
15. Park, ...	1,783	1,830	1,210	17	763	30	1,346
16. Cowcaddens, ...	6,258	4,770	3,629	67	1,995	141	4,198
17. Woodside, ...	3,151	3,027	2,791	58	1,413	122	2,974
18. Hutchesontown, ...	4,988	4,722	4,283	45	1,153	143	3,664
19. Gorbals, ...	4,505	4,004	3,557	49	1,503	113	3,466
20. Kingston, ...	3,741	3,606	3,611	50	1,558	121	3,772
21. Govanhill, ...	2,849	2,839	2,309	44	1,224	97	2,698
22. Langside, ...	1,410	1,353	1,544	28	691	57	1,407
23. Pollokshields, ...	916	1,156	1,051	10	567	21	1,191
24. Kelvinside, ...	930	1,003	958	13	623	24	1,142
25. Maryhill, ...	3,686	2,967	2,389	52	1,311	123	3,101
26. Kinning Park, ...	...	4,380	4,127	26	2,046	51	4,013
— Institutions and Harbour, ...	...	...	...	93	...	163	...
CITY, ...	3,844	3,503	3,062	1,187	1,513	2,565	3,269

TABLE XXXVII.  
GLASGOW, 1912.—PNEUMONIA.—DEATHS and DEATH-RATES in each MUNICIPAL WARD,  
with CORRESPONDING RATES for 1906-11.

MUNICIPAL WARDS.	Death-rate per Million.		1912.	
	1906-10.	1911.	Deaths.	Death-rate per Million.
1. Dalmarnock, ...	2,055	1,857	86	1,678
2. Calton, ...	2,122	1,850	90	2,600
3. Mile-end, ...	2,004	1,796	103	2,237
4. Whitevale, ...	1,660	1,722	50	1,586
5. Dennistoun, ...	969	828	35	935
6. Springburn, ...	1,831	1,383	87	1,947
7. Cowlairs, ...	1,427	1,630	48	1,603
8. Townhead, ...	1,638	1,179	62	1,755
9. Blackfriars, ...	2,986	2,957	58	2,989
10. Exchange, ...	1,425	1,196	2	1,311
11. Blythswood, ...	775	716	3	1,264
12. Broomielaw, ...	3,025	3,555	13	2,122
13. Anderston, ...	1,783	1,695	50	1,802
14. Sandyford, ...	1,555	1,314	37	1,583
15. Park, ...	820	448	13	583
16. Cowcaddens, ...	2,395	2,065	74	2,203
17. Woodside, ...	1,563	1,432	64	1,561
18. Hutchesontown, ...	3,026	2,731	98	2,511
19. Gorbals, ...	2,425	2,321	64	1,963
20. Kingston, ...	1,629	1,897	71	2,214
21. Govanhill, ...	1,636	1,339	53	1,474
22. Langside, ...	694	669	29	716
23. Pollokshields, ...	521	526	11	624
24. Kelvinside, ...	478	454	11	519
25. Maryhill, ...	1,864	1,423	71	1,790
26. Kinning Park, ...	2,045	2,102	25	1,967
— Institutions and Harbour, ...	...	...	70	...
CITY, ...	1,798	1,618	1,378	1,756



TABLE XXXVIII.

GLASGOW, 1912.—TABLE SHOWING CASES OF PUERPERAL FEVER IN EACH WARD,  
WITH NATURE OF ATTENDANCE AT BIRTH.

MUNICIPAL WARDS.	Doctor Alone.	Midwife.		Nurse and Doctor.	Total.
		Certified.	Uncertified.		
1. Dalmarnock, ... ..	4	6	3	5	18
2. Calton, ... ..	1	2	1	1	5
3. Mile-end, ... ..	1	2	3	3	9
4. Whitevale, ... ..	1	2	1	2	6
5. Dennistoun, ... ..	3	1	1	...	5
6. Springburn, ... ..	6	2	2	5	15
7. Cowlaers, ... ..	...	...	2	1	3
8. Townhead, ... ..	2	...	1	5	8
9. Blackfriars, ... ..	5	...	...	4	9
10. Exchange, ... ..	...	...	...	...	...
11. Blythswood, ... ..	1	...	...	1	2
12. Broomielaw, ... ..	1	...	...	...	1
13. Anderston, ... ..	1	1	...	1	3
14. Sandyford, ... ..	2	...	...	1	3
15. Park, ... ..	1	...	...	...	1
16. Cowcaddens, ... ..	4	1	1	2	8
17. Woodside, ... ..	2	...	1	2	5
18. Hutchesontown, ... ..	1	4	1	1	7
19. Gorbals, ... ..	1	...	...	...	1
20. Kingston, ... ..	2	1	1	5	9
21. Govanhill, ... ..	2	1	2	...	5
22. Langside, ... ..	1	1	...	1	3
23. Pollokshields, ... ..	...	...	...	1	1
24. Kelvinside, ... ..	...	...	...	...	...
25. Maryhill, ... ..	6	3	2	2	13
26. Kinning Park, ... ..	1	1	...	...	2
City, ... ..	49	28	22	43	142

TABLE XXXIX.

GLASGOW, 1912.—CERTIFICATION OF DEATHS.

	10 Years. 1891-1900.	5 Years. 1901-1905.	5 Years. 1906-10.	1911.	1912.
Total Deaths, ... ..	149,184	73,805	70,186	12,898	12,760
Of these Uncertified, ... ..	4,916	1,865	961	179	132
Died without Medical Attendance, ... ..	2,638	912	641	93	60
Deaths under 5 years, ... ..	62,350	28,985	26,956	4,806	4,449
Of these Uncertified, ... ..	3,027	1,122	453	74	56
Died without Medical Attendance, ... ..	1,738	618	498	71	52
Deaths above 5 years, ... ..	86,834	44,820	43,230	8,092	8,311
Of these Uncertified, ... ..	1,889	743	507	105	76
Died without Medical Attendance, ... ..	900	294	143	22	8
Percentage of Total Deaths } Uncertified, ... ..	3·3	2·5	1·4	1·4	1·0
Percentage of Total Deaths } which occurred without Medical Attendance, ... ..	1·8	1·2	0·9	0·7	0·5
Percentage of Deaths under } 5 years Uncertified, ... ..	4·9	3·9	1·7	1·5	1·3
Percentage of Deaths under } 5 years which occurred without Medical Attendance, ... ..	2·8	2·1	1·8	1·5	1·2
Percentage of Deaths above } 5 years Uncertified, ... ..	2·2	1·7	1·2	1·3	0·9
Percentage of Deaths above } 5 years which occurred without Medical Attendance, ... ..	1·0	0·7	0·3	0·3	0·1

TABLE XL.  
GLASGOW, 1912.—COMPARATIVE CERTIFICATION of LEGITIMATE and ILLEGITIMATE CHILDREN.

	10 Years. 1891-1900.	5 Years. 1901-1905.	5 Years. 1906-10.	1911.	1912.
Legitimate Deaths under 1 year, ... }	30,304	15,453	13,314	2,562	2,394
Of these Uncertified, ... }	1,853	821	311	42	19
Legitimate Deaths, 1—5 years, ... }	26,066	11,332	11,166	1,763	1,682
Of these Uncertified, ... }	476	144	59	9	7
Illegitimate Deaths under 1 year, ... }	4,202	2,022	1,810	382	273
Of these Uncertified, ... }	551	169	75	22	23
Illegitimate Deaths, 1—5 years, ... }	1,778	713	666	99	100
Of these Uncertified, ... }	147	18	11	1	7
Percentage Legitimate Deaths under 1 year Uncertified, ... }	6·1	5·3	2·3	1·6	0·8
Percentage Legitimate Deaths, 1—5 years, Uncertified, ... }	1·8	1·3	0·5	0·5	0·4
Percentage Illegitimate Deaths under 1 year Uncertified, ... }	13·1	8·4	4·1	5·7	8·4
Percentage Illegitimate Deaths, 1—5 years, Uncertified, ... }	8·3	2·5	1·7	1·0	7·0

TABLE XLI.  
GLASGOW, 1912.—INSURANCE of LIVES in FRIENDLY SOCIETIES, with COMPARISON of INSURANCE of LEGITIMATE and ILLEGITIMATE CHILDREN.

	10 Years. 1891-1900.	5 Years. 1901-1905.	5 Years. 1906-10.	1911.	1912.
Total Deaths, ... }	149,184	73,805	70,186	12,898	12,760
Of these Insured, ... }	87,824	44,829	45,263	8,400	8,354
Deaths under 5 years, ... }	62,350	28,985	26,956	4,806	4,449
Of these Insured, ... }	33,333	15,316	15,027	2,572	2,438
Deaths above 5 years, ... }	86,834	44,820	43,230	8,092	8,311
Of these Insured, ... }	54,491	29,513	30,236	5,828	5,916
Legitimate Deaths under 1 year, ... }	30,304	15,453	1,3314	2,562	2,394
Of these Insured, ... }	13,052	6,417	6,000	1,142	1,036
Illegitimate Deaths under 1 year, ... }	4,202	2,022	1,810	382	273
Of these Insured, ... }	434	243	254	42	33
Legitimate Deaths, 1—5 years, ... }	26,066	13,132	11,166	1,763	1,682
Of these Insured, ... }	19,232	8,401	8,484	1,355	1,338
Illegitimate Deaths, 1—5 years, ... }	1,778	713	666	99	100
Of these Insured, ... }	615	255	289	33	31
Percentage of Total Deaths Insured, ... }	58·9	60·7	64·5	65·1	65·5
Do. Deaths under 5 years Insured, ... }	53·5	52·8	55·7	53·5	54·8
Do. Deaths above 5 years Insured, ... }	62·8	65·8	69·9	72·0	71·2
Do. Legitimate Deaths under 1 year Insured, ... }	43·1	41·5	45·1	44·6	43·3
Do. Illegitimate Deaths under 1 year Insured, ... }	10·3	12·0	14·0	11·0	12·1
Do. Legitimate Deaths, 1—5 years, Insured, ... }	73·8	74·1	76·0	76·9	79·5
Do. Illegitimate Deaths, 1—5 years, Insured, ... }	34·6	35·8	43·4	33·3	31·0

TABLE XLII.—GLASGOW.—FARMED-OUT HOUSES and INMATES as at DECEMBER, 1912.

WARDS.	Number of Houses Farmed-out.		Inmates in Houses of each Size.			
	1 Apt.	2 Apts.	1 Apartment.		2 Apartments.	
			Adults.	Children.	Adults.	Children.
1. Dalmarnock, ...	...	...	...	...	...	...
2. Calton, ...	191	83	354	97	175	68
3. Mile-end, ...	...	...	...	...	...	...
4. Whitevale, ...	35	29	53	8	66	21
5. Dennistoun, ...	54	15	109	15	47	9
6. Springburn, ...	...	...	...	...	...	...
7. Cowlands, ...	...	...	...	...	...	...
8. Townhead, ...	44	6	79	15	13	11
9. Blackfriars, ...	130	151	262	61	518	107
10. Exchange, ...	13	1	26	3	2	1
11. Blythswood, ...	...	...	...	...	...	...
12. Broomielaw, ...	10	6	19	...	19	4
13. Anderston, ...	53	30	96	16	63	37
14. Sandyford, ...	...	...	...	...	...	...
15. Park, ...	...	...	...	...	...	...
16. Cowcaddens, ...	164	14	263	31	21	3
17. Woodside, ...	...	...	...	...	...	...
18. Hutchesontown, ...	35	19	67	16	46	24
19. Gorbals, ...	25	25	43	14	79	35
20. Kingston, ...	1	41	1	1	78	45
21. Govanhill, ...	...	...	...	...	...	...
22. Langside, ...	...	...	...	...	...	...
23. Pollokshields, ...	...	...	...	...	...	...
24. Kelvinside, ...	...	...	...	...	...	...
25. Maryhill, ...	...	...	...	...	...	...
26. Kinning Park, ...	...	...	...	...	...	...
CITY, ...	755	420	1,372	277	1,127	365
CENSUS, 1911, ...	738	437	...	...	...	...

TABLE XLIII.—HOUSES LET in LODGINGS, showing NUMBERS in each WARD, as at DECEMBER, 1912.

WARDS.	No. of Houses on Register.	No. of Houses Empty or in which no Lodgers kept.	No. of Houses Actually Let in Lodgings.	No. of Apart- ments.	No. to Accommodate (Adults).	Inmates found.	
						No. of Families.	Total No. of Persons (All Ages).
1. Dalmarnock, ...	4	...	4	8	27½	10	21
2. Calton, ...	20	7	13	60	180	22	67
3. Mile-end, ...	7	...	7	19	55½	16	41
4. Whitevale, ...	6	...	6	20	52	17	37
5. Dennistoun, ...	...	...	...	...	...	...	...
6. Springburn, ...	2	...	2	4	13½	5	8
7. Cowlands, ...	1	...	1	8	110	8	40
8. Townhead, ...	6	...	6	13	51	12	37
9. Blackfriars, ...	40	...	40	153	479½	98	301
10. Exchange, ...	...	...	...	...	...	...	...
11. Blythswood, ...	...	...	...	...	...	...	...
12. Broomielaw, ...	13	...	13	45	175½	34	109
13. Anderston, ...	7	...	7	28	59	16	53
14. Sandyford, ...	5	...	5	15	52	14	21
15. Park, ...	1	...	1	6	33	5	15
16. Cowcaddens, ...	4	...	4	10	29½	10	32
17. Woodside, ...	4	...	4	29	146½	29	86
18. Hutchesontown, ...	6	...	6	15	42½	14	43
19. Gorbals, ...	21	...	21	74	228	50	154
20. Kingston, ...	6	...	6	16	46½	9	27
21. Govanhill, ...	...	...	...	...	...	...	...
22. Langside, ...	...	...	...	...	...	...	...
23. Pollokshields, ...	...	...	...	...	...	...	...
24. Kelvinside, ...	...	...	...	...	...	...	...
25. Maryhill, ...	21	...	21	45	159½	51	109
26. Kinning Park, ...	1	...	1	2	6	2	8
CITY, ...	175	7	168	570	1,947	422	1,209



TABLE XLIV.—GREATER GLASGOW.—TOTAL NUMBER OF WORKSHOPS AND WORKPLACES IN EACH WARD OF THE CITY, THE TOTAL NUMBER OF INSPECTIONS, AND THE NUMBER OF NOTICES SENT TO OCCUPIERS, OF NUISANCES OR DEFECTS, DURING 1912.

MUNICIPAL WARDS.	Laundries.	Retail Bakehouses.	Bakehouses in connection with Restaurants.	Dairy Premises with plates in use.	Dairy Premises with Griddles in use.	Provision Shop Premises with Hot-plates in use.	Restaurant Kitchens.	Other Food Places.	All other Workshops.	Total Workshops (including Bakehouses and Premises with Hot-plates).	Number of Inspections.	Number of Notices issued.
1. Dalmarnock, ...	5	11	3	37	...	...	33	4	126	219	1,115	20
2. Calton, ...	6	13	...	25	...	...	16	19	379	458	5,235	218
3. Mile-end, ...	8	9	4	32	...	1	33	8	164	259	1,110	30
4. Whitevale, ...	2	7	3	21	...	1	17	12	161	224	1,727	42
5. Dennistoun, ...	6	7	1	38	...	...	8	2	102	164	993	15
6. Springburn, ...	4	1	...	26	...	...	22	...	41	94	583	32
7. Cowlands, ...	2	3	...	11	...	...	20	...	58	94	533	7
8. Townhead, ...	3	8	...	16	1	...	21	...	138	187	1,469	51
9. Blackfriars, ...	1	9	1	15	...	1	10	23	281	341	2,791	156
10. Exchange, ...	1	5	2	...	...	...	27	5	392	432	2,359	157
11. Blythwood, ...	1	4	...	...	...	...	44	6	378	433	2,622	92
12. Broomielaw, ...	4	2	...	3	...	...	31	15	327	382	3,255	104
13. Anderston, ...	5	6	...	10	...	...	27	3	88	139	412	31
14. Sandyford, ...	6	6	...	8	...	...	7	3	247	277	497	36
15. Park, ...	6	5	2	9	...	...	3	3	186	214	584	23
16. Cowcaddens, ...	6	11	...	17	...	1	30	1	183	249	921	46
17. Woodside, ...	12	12	...	34	2	...	17	...	139	216	676	33
18. Hutchesontown, ...	6	7	...	37	...	...	16	12	79	157	1,016	14
19. Gorbals, ...	7	15	...	17	...	2	18	11	349	419	3,167	55
20. Kingston, ...	10	5	1	20	2	3	35	6	196	278	1,610	15
21. Govanhill, ...	3	10	...	31	1	1	...	3	25	74	128	11
22. Langside, ...	5	12	...	39	...	...	...	1	56	113	79	...
23. Pollokshields, ...	3	6	...	10	1	...	...	1	40	61	59	5
24. Kelvinside, ...	1	1	...	3	...	...	...	...	86	91	94	...
25. Maryhill, ...	4	4	...	22	...	...	7	...	65	102	175	17
26. Kinning Park, ...	4	1	1	12	...	...	...	2	47	67	80	...
27. Plantation, ...	5	2	...	24	1	...	21	1	114	168	2	...
28. Ibrox, ...	1	2	...	4	...	...	18	1	70	96	3	...
29. Govan Central, ...	5	4	...	10	1	...	5	4	44	73	...	...
30. Fairfield, ...	3	2	...	16	...	1	15	...	59	96	15	...
31. Partick, ...	7	3	3	11	...	...	2	...	79	105	4	1
32. Partick Central, ...	1	8	...	11	...	...	10	2	70	102	...	...
33. Partick West, ...	2	4	2	14	...	...	7	...	41	70	...	...
34. Jordanhill, ...	...	...	...	4	...	...	...	...	...	4	3	1
35. Pollokshaws, ...	1	7	...	19	...	...	...	...	41	68	1	...
36. Cathcart, ...	...	3	...	...	...	...	...	...	...	3	...	...
37. Tollcross and Shettleston, ...	...	4	6	14	...	...	...	...	...	24	...	...
TOTAL IN CITY, ...	146	219	29	620	9	11	520	148	4,851	6,553	33,318	1,212

TABLE XLV.  
 FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND  
 HOMEWORK.

INSPECTION.

(Including Inspections made by Sanitary Inspectors.)

PREMISES. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories (including Factory Laundries), ... Workshops (including Workshop Laundries), Workplaces (other than Outworkers' Premises included in Part 3 of this Report), ... ..	33,318	1,346	...
Total, ... ..	33,318	1,346	...

DEFECTS FOUND.

PARTICULARS. (1)	Number of Defects			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
Nuisances under the Public Health Acts—				
Want of cleanliness, ... ..	501	496	...	...
Want of ventilation or light, ... ..	39	35	...	...
Overcrowding, ... ..	3	7	...	...
Want of drainage of floors, .. ..	559	516	...	...
Other nuisances, ... ..				
Sanitary accommodation—(a) Insufficient, ... .. (b) Unsuitable or defective, } (c) Not separate for sexes, }	99	75	...	...
Offences under the Factory and Workshop Act—				
Illegal occupation of underground bakehouse (Section 101), ... ..	...	...	...	...
Breach of special sanitary requirements for bakehouses (Sections 97 to 100), ... ..	145	153	...	...
Other offences, ... ..	...	...	...	...
(Excluding offences relating to outwork which are included in Part 3 of this Report.)	...	...	...	...
Total, ... ..	1,346	1,282	...	...

\* Including those specified in Sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

TABLE XLVI.

REGISTERED WORKSHOPS.		OTHER MATTERS.	
Workshops on the Register (Section 131) at the end of the year.	Number. (2)	Class. (1)	Number. (2)
Laundries, ...	...	Matters notified to H.M. Inspector of Factories :—  Failure to affix Abstract of the Factory and Workshop Act, 1901 (Section 133), ...  Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (Section 5) ...  Other, ...  Underground Bakehouses (Section 101) :—  Certificates granted during the year, ...  In use at the end of the year, ...	8  47  47  ...
Bakehouses :—	...		
Underground, ...	195		
Overground, ...	65		
Restaurant Kitchens,	260		
Other Food Places,	520		
All other Workshops,	148		
Dairy and other Premises with hot plates for baking purposes,	4,851		
	640		
Total number of workshops on Register, ...	6,565		

Important classes of workshops, such as workshop bakehouses, may be enumerated here.

NOTE.—The Factory and Workshop Act, 1901 (Section 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, laundries, workplaces, or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Home Work Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

July, 1913.

(Signature) A. K. CHALMERS,  
Medical Officer of Health.



TABLE XLVII.—HOME WORK.

NATURE OF WORK.*	OUTWORKERS' LISTS, SECTION 107.																OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	LISTS RECEIVED FROM EMPLOYERS.							Notices served on Occupiers as to keeping or sending lists. (8)	PROSECUTIONS.			Instances. (11)	Notices served. (12)	Prosecu- tions. (13)	Instances. (14)	Orders made (S. 110). (15)	Prosecu- tions (Sections 109, 110). (16)					
	Twice in the year.		Once in the year.						Failing to keep or permit inspection of lists. (9)	Failing to send lists. (10)												
	Lists. † (2)	Outworkers. † (3)	Con- tractors. (4)	Work- men. (4)	Lists. (5)	Outworkers. †																
						Con- tractors. (6)	Work- men. (7)															
(1)	728	1,190	1,587	141	202	140	...	...	...	...	...	...	...	...	...	...	...					
Wearing apparel—	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
(1) making, &c.,...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
(2) cleaning and washing,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Household linen, ...	4	18	4	...	...	1	...	...	...	...	...	...	...	...	...	...	...					
Lace, lace curtains and nets,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Curtains & furniture hangings,	2	5	...	5	5	3	...	...	...	...	...	...	...	...	...	...	...					
Furniture and upholstery, ...	56	124	...	8	17	...	...	...	...	...	...	...	...	...	...	...	...					
Electro-plate, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
File making,...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Brass and brass articles,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Fur pulling, ...	2	7	...	3	2	1	...	...	...	...	...	...	...	...	...	...	...					
Cables and chains, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Anchors and grapnels,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Cart gear, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Locks, latches, and keys,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Umbrellas, &c., ...	10	19	24	3	4	17	...	...	...	...	...	...	...	...	...	...	...					
Artificial flowers, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Nets other than wire nets,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Tents, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Sacks, ...	2	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Racquet and tennis balls,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Paper bags and boxes,	30	31	103	1	1	...	...	...	...	...	...	...	...	...	...	...	...					
Brush making,	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Pea picking, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Feather Sorting, ...	...	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Carding, &c., of buttons, &c.,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Stuffed toys,...	...	...	14	...	...	3	...	...	...	...	...	...	...	...	...	...	...					
Basket making, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Total ...	836	1,396	1,740	161	231	165	...	...	...	29	21	...	4	3	...	...	...					

\* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class *only*, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3, and 4 are the *total* number of the lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year, and of the entries of names of outworkers in these lists. The entries in column 2 must necessarily be *even* numbers, as there will be two lists for each employer; in some previous returns odd numbers have been inserted. The figures in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since, in the February and August lists of the same employer, the same outworker's name will often be repeated.

TABLE XLVIII.—GLASGOW AND AREAS ADDED TO THE CITY, 1912.—WORKSHOPS MEASURED AND REGISTERED.

Nature of Workshop.	Number of Workshops.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average C Feet of Spa each Pers
I. Professional Occupations and their Subordinate Services—							
1. Medical—							
Dentists' Mechanics, ...	6	9	14	3	7	1,698	637
2. Art, Music, Drama, &c.—							
Engravers, ...	2	2	5	...	...	3,241	1,296
Photographers, ...	7	12	7	17	9	1,600	582
II. Domestic Offices or Services—							
Laundries, ...	13	25	1	35	8	2,217	1,260
III. Metals, Machines, Implements, and Conveyances—							
1. Engineering & Machine Making—							
Blacksmiths, ...	3	3	5	...	...	4,018	2,411
Machine Repairers, ...	1	1	2	...	1	1,125	375
Metal Refiners, ...	2	3	5	1	...	3,349	1,674
Saw Maker, ...	1	1	1	...	...	2,573	2,573
2. Electrical Apparatus—							
Tool Makers, ...	1	1	3	...	...	9,672	3,224
3. Miscellaneous Metal Trades—							
Sheet-metal Workers, ...	1	1	1	...	...	2,187	2,187
Tinsmiths and Copper- smiths, ...	5	6	19	...	2	9,846	2,813
Farriers, ...	3	3	14	...	...	17,891	3,833
Sand-paper Maker, ...	1	1	1	...	2	16,500	5,500
4. Vehicles—							
Cycle and Motor Makers, ...	3	3	5	...	...	6,008	3,604
Cartwrights, ...	1	1	2	...	...	5,750	2,875
Coachbuilders, ...	2	3	5	...	...	3,348	5,108
IV. Precious Metals, Jewels, Watches, Instruments, and Games—							
1. Precious Metals and Jewellery—							
Jewellers, Watch and Clock Makers, ...	13	14	27	1	3	2,085	942
Electro Plating, ...	1	2	2	1	...	3,522	2,348
2. Watches and Scientific Instru- ment Makers—							
Nautical Instrument Makers, ...	2	4	5	...	1	2,105	1,403
3. Apparatus for Sports and Games—							
Golf-club Makers, ...	2	5	15	8	6	6,132	1,057
4. Musical Instrument Makers, ...							
Reed Maker, ...	2	2	4	...	...	3,044	1,522
	1	1	1	...	1	565	282
V. Building and Works of Construc- tion—							
1. Lathe Splitter, ...	1	1	1	...	...	1,755	1,755
2. House Building, &c.—							
Joiners and Wrights, ...	12	12	28	...	1	4,602	1,904
Plumbers and Gasfitters, ...	12	13	39	3	9	2,509	639
Ventilating Engineers, ...	1	1	3	...	1	23,637	5,909
Coopers, ...	1	1	9	...	...	37,500	4,166

WORKSHOPS MEASURED AND REGISTERED DURING 1912.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space for each Person.
Wood, Furniture, Fittings, and Decorations—							
Coffin Making and Mount- ing,     ...     ...     ...	4	4	4	...	...	2,618	2,618
1. Furniture, Fittings, and Decora- tions—							
Upholsterers,     ...     ...	4	4	8	2	1	5,652	2,055
Upholstery Trimming Makers,     ...     ...	2	3	2	12	11	13,564	1,627
Picture-frame Maker,     ...	1	1	1	...	...	3,186	3,186
Wood Carvers,     ...     ...	2	2	3	...	1	1,860	940
Fancy Box Maker,     ...	1	2	...	3	...	1,858	1,238
Cabinetmakers and French Polishers,     ...     ...	29	38	79	26	7	5,687	1,929
Basket Makers,     ...     ...	3	3	6	...	...	2,194	1,097
Painters,     ...     ...	9	10	21	1	2	2,849	1,187
2.—Wood and Bark—							
Packing Case Maker,     ...	1	1	1	...	1	9,240	4,620
Billiard Table Maker,     ...	1	1	3	...	...	1,944	648
Show Case Maker,     ...	1	2	6	...	...	5,753	1,917
Brick, Cement, Pottery, and Glass—							
Granite Workers,     ...     ...	1	2	9	...	...	7,600	1,688
Embosser,     ...     ...	1	1	4	...	...	24,244	6,061
Chemicals, Oil, Grease, Soap, Resin, &c.—							
Colouring Manufacture—							
Drysalters,     ...     ...	2	2	5	4	...	5,200	1,155
Paint Manufacturers,     ...	2	2	4	...	...	8,094	4,047
3. Salt Drugs and other Chemicals and Compounds—							
Manufacturing Chemists,	3	7	4	1	1	7,074	8,253
4. Oil, Grease, Soap, Resin, &c.—							
Waterproof Manufacturer,	1	1	...	3	1	4,306	1,076
India-rubber Tyre Maker,	1	1	1	...	...	1,716	1,716
Soap Maker,     ...     ...	1	1	2	...	...	6,867	3,433
Skins, Leather, Hair, & Feathers—							
Skins and Leather—							
Furriers,     ...     ...	2	2	2	5	1	2,596	649
Fancy Leather Goods Maker,     ...     ...	1	1	2	1	2	10,835	2,167
Saddlery and Harness—							
Saddlers,     ...     ...	8	8	15	2	3	4,315	1,726
Hair and Feathers—							
Brushmaker,     ...     ...	1	2	6	...	...	1,639	546
Wig Makers,     ...     ...	2	4	8	3	4	3,370	898
Paper, Stationery, Books, and Prints—							
Paper and Stationery—							
Paper-bag Maker,     ...     ...	1	3	1	8	1	2,000	600
Prints and Books—							
Ticket Writers,     ...     ...	5	8	12	5	3	3,815	1,526
Printers and Bookbinders,	2	2	4	1	1	1,745	581
Textile Fabrics—							
Hemp and other Fibrous Ma- terials—							
Sack Maker and Repairer,	3	6	1	37	...	20,604	3,253
Flag Makers,     ...     ...	2	2	3	1	...	2,435	1,217



WORKSHOPS MEASURED AND REGISTERED DURING 1912.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space in each Person.
XI. Textile Fabrics— <i>Continued.</i>							
2. Mixed or Unspecified Materials—							
Muslin Hemmer, ...	1	1	2	9	3	6,480	462
Pattern Book Maker, ...	1	1	1	3	3	2,762	394
Wool Sorter, ...	1	1	...	8	2	5,760	576
Calenderer, ...	1	1	8	7	...	15,422	1,028
XII. Dress—							
Button and Stud Makers, ...	2	2	2	...	8	6,133	1,226
Blouse Makers, ...	2	2	...	9	...	3,020	671
Belt, Brace, and Necklet Maker, ...	...	1	7	...	4	19,164	1,742
Boot, Shoe, and Slipper Makers, ...	110	118	192	3	8	1,911	1,116
Dressmakers, ...	82	85	1	209	40	1,684	572
Clog Makers, ...	5	6	16	...	...	2,746	1,036
Hat and Cap Makers, ...	4	6	13	17	13	3,125	436
Mantle and Costume Makers, ...	10	19	39	64	19	3,205	499
Milliners, ...	24	25	...	60	17	2,775	901
Shirt and Collar Makers, ...	2	3	2	19	3	5,614	701
Tailors and Clothiers, ...	110	178	347	510	146	3,002	532
Hosiery Manufacturer, ...	1	1	...	3	...	2,070	690
Highland Dress Accoutrement Maker, ...	1	1	1	...	...	17,076	17,076
Underclothing Manufacturers, ...	7	8	...	29	2	4,177	1,077
Shawl and Scarf Maker, ...	1	2	...	12	3	4,049	1,012
Umbrella Maker, ...	3	3	3	3	...	1,159	579
Draper, ...	2	4	2	3	...	3,588	2,871
Art Needle Work, ...	1	2	...	6	1	3,283	988
Stay Makers, ...	2	3	...	4	...	2,118	1,588
XIII. Food, Tobacco, and Drink—							
1. Food—							
Ham Curers, ...	5	6	17	...	...	20,080	7,087
Fish Curer, ...	1	1	2	1	...	1,049	349
Sausage-skin and Spice Maker, ...	1	1	...	3	...	6,864	2,288
Confectioners and Preserve Makers, ...	11	22	18	48	24	6,107	1,493
Tea Blender and Packer, ...	3	3	5	4	3	4,049	1,012
Preserved Meat Makers, ...	2	2	...	2	2	1,976	988
Bottling and Labelling, ...	2	2	5	4	1	6,791	1,358
Tobacco Makers, ...	2	2	...	24	7	1,051	677
XIV. Other General and Undefined Workers and Dealers—							
Sundry Specified Industries—							
Advertising Agent, ...	1	1	3	...	...	6,930	2,310
Fire-light Maker, ...	1	1	2	...	...	2,231	1,115
Rag and Waste Paper Merchants, ...	12	22	8	37	...	7,462	3,648
Tobacco Pipe Maker, ...	1	1	2	...	...	2,112	1,056
Florist Outfitter, ...	1	1	...	2	1	3,347	1,115

## ABSTRACT OF RESTAURANTS MEASURED AND REGISTERED DURING 1912.

Districts.	Number of Restaurants.	Total Number of Rooms.	Total Number of Men.	Total Number of Women.	Total Young Persons, 14 to 18 Years.	Average Cubic Feet of Space in each Room.	Average Cubic Feet of Space in each Person.
Central, ...	24	27	15	90	3	3,490	872
Eastern, ...	41	41	28	56	3	2,012	948
Western, ...	...	...	...	...	...	...	...
Northern, ...	33	36	24	45	14	2,334	1,012
Southern, ...	16	18	16	25	3	2,167	1,070
North-West, ...	3	6	1	5	1	2,042	1,750
Kinning Park, ...	...	...	...	...	...	...	...
South Suburban, ...	...	...	...	...	...	...	...
South-Western, ...	...	...	...	...	...	...	...

TABLE XLIX.—GLASGOW AND AREAS ADDED TO THE CITY, 1912.—NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS, AS AT 31st DECEMBER.

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
1. Professional Occupations and their Subordinate services—				
1. Medical—				
Artificial Teeth Makers, ... ..	40	79	7	22
Artificial Limb Makers, ... ..	3	10	3	...
2. Art, Music, Drama, &c.—				
China Painting, ... ..	2	2	5	...
Fine Art and Fancy Goods Dealers, ...	3	7	9	1
Photographers, ... ..	53	55	129	37
Engravers, ... ..	28	66	4	24
Sculptors, ... ..	10	33	...	...
II. Domestic Offices or Services—				
Laundries, .. ...	146	15	543	88
III. Mining and Quarrying—				
1. Mines and Quarry Service—				
Marble Cutters, ... ..	6	30	...	...
2. Dealers in Products of Mines and Quarries—				
Asbestos Manufacturer, ... ..	1	...	6	...
IV. Metals, Machines, Implements, and Conveyances—				
1. Manufacture of Mixed or Unspecified Metals—				
Metal Merchants and Refiners, ... ..	6	22	1	...
Spelter Manufacturer, .. ...	1	5	...	...
2. Engineering and Machine Making—				
Blacksmiths, ... ..	70	204	...	9
Boiler Coverers, ... ..	3	9	...	...
Brassfinishers, ... ..	11	28	5	2
Farriers, ... ..	32	125	...	3
Heating and Ventilating Engineers, ...	6	34	1	2
Indicator Makers, ... ..	2	11	...	2
Machine Makers and Repairers, ... ..	16	117	...	5
Machinists, ... ..	4	1	7	4
Pattern Makers, ... ..	3	15	...	3
Tinsmiths and Coppersmiths, ... ..	45	173	5	37
Sheet-metal Workers, ... ..	13	45	...	4
Galvanizer, ... ..	1	40	...	...
3. Electrical Apparatus—				
Electrical Engineers, ... ..	18	79	...	19
4. Tools—				
Saw Makers, ... ..	7	13	...	5
Cutlers, ... ..	3	5	...	...
File Cutters, ... ..	3	14	1	2
Grindstone Maker, ... ..	1	2	...	...

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS,  
AS AT 31st DECEMBER, 1912.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
IV. Metals, Machines, &c.— <i>Continued</i> —				
5. Types, Blocks, and Dies—				
Die Sinker, ... ..	1	6	...	...
6. Arms—				
Gunsmiths, ... ..	3	9	...	1
7. Miscellaneous Metal Trades—				
Chain Maker, ... ..	1	11	...	...
Fireproof-door Maker, ... ..	1	8	...	...
Lamp Makers, ... ..	2	8	...	...
Lead Worker and Embosser, ... ..	1	3	5	...
Weighing Machine and Scale Makers, ... ..	4	15	...	3
Wire Workers, ... ..	7	32	...	6
Metal Designers, ... ..	2	5	2	...
8. Ships and Boats—				
Boat Builders, ... ..	3	8	...	...
9. Vehicles—				
Cartwrights, ... ..	36	153	3	10
Carriage Builders, ... ..	12	154	...	21
Cycle and Motor Makers and Repairers, ... ..	46	97	3	13
10. Dealers—				
Ironmongers and Mill Furnishers, ... ..	5	16	...	1
V. Precious Metals, Jewels, Watches, Instruments, and Games—				
1. Precious Metals and Jewellery—				
Gold Beaters, ... ..	2	17	1	...
Jewel-case Makers, ... ..	4	17	10	1
Jewellers, Goldsmiths, Watch and Clock Makers, ... ..	171	409	23	85
2. Watches and Scientific Instruments—				
Nautical and Scientific Instrument Makers, ... ..	10	31	4	7
Opticians, ... ..	7	14	...	3
Surgical Instrument Makers, ... ..	3	7	1	1
3. Musical Instruments—				
Musical Instrument Makers, ... ..	21	44	27	7
4. Tackle for Sports and Games—				
Billiard Table Makers, ... ..	5	25	21	...
Fishing-tackle Makers, ... ..	3	1	92	17
Fish Bass Makers, ... ..	2	1	4	...
Golf-club Makers, ... ..	11	34	8	10



NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS,  
AS AT 31st DECEMBER, 1912.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
VI. Building and Works of Construction—				
1. Housebuilding, &c.—				
Joiners and Wrights, ... ..	215	669	1	90
Locksmiths, ... ..	3	5	...	1
Painters and Decorators, ... ..	58	279	14	62
Plasterers and Modellers, ... ..	16	42	2	17
Plumbers and Gasfitters, ... ..	247	800	20	202
Slaters, ... ..	15	97	...	6
Stair Railers, ... ..	3	13	...	...
Tile Layers, ... ..	2	4	...	1
Concrete Step Makers, ... ..	4	22	...	2
Cistern Maker, ... ..	1	3	...	...
Glaziers, ... ..	28	117	2	20
Masons, ... ..	6	18	...	1
VII. Wood, Furniture, Fittings, and Decorations—				
1. Furniture, Fittings, and Decorations—				
Picture-frame Makers, ... ..	31	90	7	13
Shop Fitters and Show-case Makers, ...	8	24	3	...
Modellers, ... ..	5	25	...	2
Upholsterers, ... ..	53	170	149	54
Upholstery Trimming Makers, ... ..	9	12	88	41
Basket Makers, ... ..	7	16	1	1
Bedding Manufacturers, ... ..	12	37	25	4
Artist and Decorator, ... ..	1	3	...	...
Bellows Maker, ... ..	1	3	...	...
Cabinetmakers and French Polishers, ...	166	723	205	77
Carvers and Gilders, ... ..	28	138	...	11
Coffin and Mounting Making, ... ..	16	41	2	...
Fancy-box Makers, ... ..	28	130	315	79
Box-clip Makers, ... ..	2	3	4	2
Map Mounting, ... ..	1	4	1	1
Marquetry-cutting, ... ..	1	2	1	1
Window Blind Makers, ... ..	3	5	5	1
2. Wood and Bark—				
Coopers, ... ..	17	95	1	3
Cork Cutters, ... ..	9	37	21	17
Lathsplitters, ... ..	4	22	...	1
Packing-case Makers, ... ..	6	34	...	5
Portmanteau Makers, ... ..	7	50	10	15
Saddle Tree Maker, ... ..	1	4	...	...
Trunk Makers, ... ..	4	25	3	4
Wood Turner, ... ..	1	2	...	...
VIII. Brick, Cement, Pottery, and Glass—				
Glass Stainers and Embossers, ... ..	16	87	...	16
Pavement-light Maker, ... ..	1	10	...	2
Stucco Ornament Maker, ... ..	1	1	...	...

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS,  
AS AT 31st DECEMBER, 1912.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
<b>IX. Chemicals, Oil, Grease, Soap, Resin, &amp;c.—</b>				
1. Colouring Matter—				
2. Salt, Drugs, and other Chemicals and Compounds—				
Chemical Manufacturers, ... ..	4	9	4	...
Fire Extinguisher Maker, ... ..	1	6	...	3
Manufacturing Chemists, ... ..	20	37	27	16
3. Oil, Grease, Soap, Resin, &c.—				
Oil, Paint, and Varnish Manufacturers, ...	12	25	10	7
Drysalters, ... ..	7	13	14	5
Soap and Soda Manufacturers, ... ..	3	6	1	2
India Rubber Merchants, ... ..	4	9	...	..
India Rubber Stamp Makers, ... ..	4	8	1	...
Waterproof Manufacturers, ... ..	7	5	18	4
<b>X. Skins, Leather, Hair, and Feathers—</b>				
1. Skins and Leather—				
Currier and Tanner, ... ..	1	3	1	...
Furriers, ... ..	22	30	102	23
Gut Cleaner, ... ..	1	16	35	10
Hat-box Makers, ... ..	2	1	3	3
Hide and Skin Merchants, ... ..	2	8	2	2
Rabbit Skin Driers, ... ..	2	3	...	...
2. Saddlery and Harness—				
Leather Belt Makers, .. ..	4	17	...	...
Saddlers, ... ..	49	181	16	23
Whip Maker, ... ..	1	1	1	...
Leather Scrap Sorting, ... ..	1	...	5	...
3. Hair and Feathers—				
Brush Makers, ... ..	16	126	26	9
Feather Dressers, ... ..	4	...	19	2
<b>XI. Paper, Prints, Books, and Stationery—</b>				
1. Paper and Stationery—				
Card Cutters, ... ..	2	9	8	5
Envelope Maker, ... ..	1	3	18	7
Paper-bag Makers, ... ..	13	5	195	66
Carbon Paper Maker, ... ..	...	...	...	...
2. Books and Prints—				
Lithographers, ... ..	9	17	10	8
Printers, Bookbinders, and Stationers, ...	41	132	114	94
Ticket Writers, ... ..	16	41	7	9
Show Card Makers, ... ..	2	25	15	2
Fancy Leather Goods Makers, ... ..	2	5	4	5

NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS,  
AS AT 31st DECEMBER, 1912.—*Continued.*

Nature of Workshop.	Number of Workshops	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
<b>XII. Textile Fabrics—</b>				
1. Cotton—				
Warpers and Winders, ... ..	5	19	33	...
Weavers, ... ..	11	33	8	3
2. Wool and Worsted—				
Pattern Weaving and Darning, ... ..	8	46	25	5
Shawl and Scarf Manufacturers, ... ..	2	3	72	30
Wool Sorters, ... ..	3	...	14	2
3. Flax, Linen, Hemp, Jute, and other Fibrous Materials—				
Rope Makers, ... ..	2	8	...	...
Sack Makers and Repairers, ... ..	16	27	104	1
Sail Maker, ... ..	1	8	...	2
4. Mixed or Unspecified Materials—				
Carpet Sewing, ... ..	3	4	9	1
Curtain Manufacturer, ... ..	1	2	9	3
Embroiderers, ... ..	6	14	35	4
Flag Makers, ... ..	4	5	11	...
Fringer, ... ..	1	...	1	2
Tape-line Makers, ... ..	2	3	4	1
Thread Manufacturers, ... ..	2	162	174	...
5. Bleaching, Printing, Dyeing, &c.—				
Calenderers, ... ..	11	68	104	31
6. Dealers—				
Drapers, ... ..	15	21	46	18
<b>XIII. Dress—</b>				
Belt, Brace, and Necklet Makers, ... ..	2	7	21	15
Blouse Makers, ... ..	13	...	46	8
Boot, Shoe, and Slipper Makers, ... ..	595	1,259	55	50
Button and Stud Makers, ... ..	3		6	8
Children's Outfitters, ... ..	3	1	32	...
Clog Makers, ... ..	10	33	1	...
Dressmakers, ... ..	622	57	3,179	670
Hairdressers and Wig Makers, ... ..	63	139	25	17
Hat and Cap Manufacturers, ... ..	25	63	142	110
Handkerchief Hemmers, ... ..	7	15	177	52
Hosiery Manufacturers, ... ..	15	6	68	24
Last and Boot-tree Maker, ... ..	1	3	...	...
Mantle and Costume Makers, ... ..	73	67	1,223	200
Milliners, ... ..	225	3	789	222
Napery Hemming, ... ..	4	...	17	2
Pattern Book Makers, ... ..	11	23	77	53
Shirt and Collar Makers, ... ..	17	84	363	32
Stay Makers, ... ..	13	...	33	10
Tailors and Clothiers, ... ..	631	2,861	2,007	568
Tie Makers, ... ..	3	...	33	25
Umbrella Makers, ... ..	32	59	173	45



NUMBER OF WORKSHOPS AND EMPLOYEES ON THE REGISTERS,  
AS AT 31ST DECEMBER, 1912.—*Continued.*

Nature of Workshop.	Number of Workshops.	Total Number of Men.	Total Number of Women.	Total Young Persons 14 to 18 Years.
XIII. Dress— <i>Continued</i> —				
Underclothing Manufacturers, ... ..	54	5	360	69
Hat Band and Pad Maker, ... ..	1	...	1	1
Highland Dress Accoutrement Makers, ...	4	6	6	...
Shroud and Grave-gown Makers, ... ..	4	1	10	...
XIV. Food, Tobacco, Drink, and Lodging—				
1. Food—				
Coffee Essence Maker, ... ..	1	18	32	47
Confectioners and Preserve Makers, ...	39	50	106	129
Fish Curers, ... ..	24	76	75	8
Ham Curers, ... ..	25	108	...	2
Pickle and Sauce Makers, ... ..	5	26	260	7
Poulterers, ... ..	4	28	2	5
Preserved Meat Makers, ... ..	15	13	22	5
Sausage-skin and Spice Makers, ... ..	22	37	53	11
Tea Blenders and Packers, ... ..	14	29	23	16
Packing Grocery Goods, ... ..	3	2	11	6
Produce Merchants, ... ..	8	16	8	7
2. Tobacco—				
Tobacco and Cigarette Makers, ... ..	15	45	157	86
3. Dealing with Spirituous Drinks—				
Bottling and Labelling, ... ..	43	125	162	29
4. Board, Lodging, &c.—				
Restaurants, ... ..	520	457	1,158	99
XV. Gas, Water, and Electricity Supply—				
Meter Fitting and Repairing, ... ..	1	430	...	...
XVI. Other General and Undefined Workers and Dealers—				
1. About Animals—				
Birds' Seed Merchant, ... ..	1	2	1	1
2. Sundry Specified Industries—				
Artistic Florist, ... ..	1	3	...	3
Mail-cart Makers, ... ..	1	8	4	...
Tobacco-pipe Makers, ... ..	10	52	16	5
Firelight Manufacturers, ... ..	10	68	7	2
Japanners, ... ..	7	12	16	8
Rag and Waste Paper Merchants, ... ..	84	264	435	21
Taxidermists, ... ..	2	3	...	1
Emery and Glass Paper Makers, ... ..	3	7	1	9
Florist, ... ..	3	1	8	4
3. Makers and Dealers (general and undefined)—				
Manufacturers and Warehousemen, ...	2	...	41	12
Smaller Trades, ... ..	9	25	2	3
Stores, ... ..	24	99	3	...
Totals, ... ..	5,665	14,089	14,572	4,339

TABLE L.

GLASGOW, 1912.—UNDERGROUND BAKEHOUSES, CERTIFIED AND OTHERWISE, WITH  
NUMBER OF VISITS.

WARDS.	Closed previous to 1912.	Closed during 1912.	No. on Register at 31st Dec., 1912.	Total Certified. 1912.		Inspec- tions. 1912.
				Occupied.	Unoccupied.	
1. Dalmarnock, ... ..	...	...	1	1	...	2
2. Calton, ... ..	1	...	3	3	...	5
3. Mile-end, ... ..	...	...	...	...	...	...
4. Whitevale, ... ..	1	...	1	...	1	2
5. Dennistoun, ... ..	1	...	3	2	...	6
6. Springburn, ... ..	1	...	1	1	...	2
7. Cowlairs, ... ..	1	...	1	1	...	2
8. Townhead, ... ..	4	...	3	2	...	6
9. Blackfriars, ... ..	7	...	3	3	...	8
10. Exchange, ... ..	4	...	7	7	...	14
11. Blythwood, ... ..	4	1	2	2	...	5
12. Broomielaw, ... ..	4	1	3	2	1	6
13. Anderston, ... ..	2	...	2	1	...	3
14. Sandyford, ... ..	3	1	7	6	...	14
15. Park, ... ..	...	...	4	2	1	10
16. Cowcaddens, ... ..	9	...	7	3	2	12
17. Woodside, ... ..	3	...	2	2	...	5
18. Hutchesontown, ... ..	1	...	3	...	3	6
19. Gorbals, ... ..	10	...	4	3	1	5
20. Kingston, ... ..	1	...	2	1	...	3
21. Govanhill, ... ..	3	...	3	2	1	6
22. Langside, ... ..	...	...	1	...	...	2
23. Pollokshields, ... ..	2	...	5	4	1	10
24. Kelvinside, ... ..	1	...	1	1	...	2
25. Maryhill, ... ..	2	...	...	...	...	...
26. Kinning Park, ... ..	...	...	1	1	...	2
27. Plantation, ... ..	...	...	2	1	1	...
28. Ibrox, ... ..	...	...	...	...	...	...
29. Govan Central, ... ..	...	...	...	...	...	...
30. Fairfield, ... ..	...	...	...	...	...	...
31. Partick East, ... ..	...	...	1	1	...	...
32. Partick Central, ... ..	...	...	...	...	...	...
33. Partick West, ... ..	...	...	...	...	...	...
34. Jordanhill, ... ..	...	...	...	...	...	...
35. Pollokshaws, ... ..	...	...	1	1	...	...
36. Cathcart, ... ..	...	...	...	...	...	...
37. Tollcross and Shettleston, ... ..	...	...	...	...	...	...
CITY (Extended), ...	65	3	74	53	12	138

TABLE LI.

GLASGOW, 1912.—OVERGROUND BAKEHOUSES.

WARDS.	On Register, 1911.	On Register, 1912.	Inspections.	Number of Air Samples.	Number of Bakehouses from which Air Samples were taken.
1. Dalmarnock, ...	15	13	...	...	...
2. Calton, ...	12	10	...	...	...
3. Mile-end, ...	18	13	1	...	...
4. Whitevale, ...	14	10	3	2	2
5. Dennistoun, ...	6	6	1	1	1
6. Springburn, ...	4	...	...	...	...
7. Cowlairs, ...	2	2	...	...	...
8. Townhead, ...	8	6	1	...	...
9. Blackfriars, ...	5	7	5	...	...
10. Exchange, ...	...	...	...	...	...
11. Blythwood, ...	...	2	1	1	1
12. Broomielaw, ...	...	...	...	...	...
13. Anderston, ...	2	5	6	1	1
14. Sandyford, ...	...	...	7	4	4
15. Park, ...	1	5	7	3	3
16. Cowcaddens, ...	10	8	22	8	8
17. Woodside, ...	14	10	15	2	2
18. Hutchesontown, ...	4	7	12	5	5
19. Gorbals, ...	12	12	19	3	3
20. Kingston, ...	6	5	12	3	3
21. Govanhill, ...	9	8	8	2	2
22. Langside, ...	12	12	15	3	3
23. Pollokshields, ...	1	2	2	2	2
24. Kelvinside, ...	...	...	...	...	...
25. Maryhill, ...	5	4	...	...	...
26. Kinning Park, ...	...	1	...	...	...
27. Plantation, ...	...	1	...	...	...
28. Ibrox, ...	...	2	...	...	...
29. Govan Central, ...	...	4	...	...	...
30. Fairfield, ...	...	2	...	...	...
31. Partick East, ...	...	5	...	...	...
32. Partick Central, ...	...	8	...	...	...
33. Partick West, ...	...	6	...	...	...
34. Jordanhill, ...	...	...	...	...	...
35. Pollokshaws, ...	...	6	...	...	...
36. Cathcart, ...	...	3	...	...	...
37. Tollcross and Shettleston, ...	...	10	...	...	...
CITY (Extended),	160	195	137	40	40



TABLE LII.

GLASGOW, 1912.—REGISTRATION OF HAIRDRESSERS' SALOONS.

WARDS.	On Register, 31st Dec., 1911.	Applied for Registration during 1912.	Number Certified during 1912.	Withdrawn from Register.		On Register, 31st Dec., 1912.	Inspections.	Renewal Certificates.
				(a) Premises Closed.	(b) Non-compliance with Regulations.			
1. Dalnarnock, ...	2	...	...	...	...	2	1	...
2. Calton, ...	9	...	...	...	...	9	6	...
3. Mile-end, ...	11	...	...	...	...	11	22	...
4. Whitevale, ...	8	...	...	...	...	8	11	...
5. Dennistoun, ...	6	...	...	...	...	6	7	...
6. Springburn, ...	5	...	...	...	...	5	10	...
7. Cowlares, ...	5	...	...	...	...	5	8	...
8. Townhead, ...	15	...	...	2	...	13	13	...
9. Blackfriars, ...	10	...	...	...	...	10	10	...
10. Exchange, ...	14	...	...	1	...	13	11	...
11. Blythswood, ...	4	...	...	...	...	4	2	...
12. Broomielaw, ...	6	...	...	...	...	6	5	...
13. Anderston, ...	5	...	...	...	...	5	8	...
14. Sandyford, ...	5	...	...	...	...	5	4	...
15. Park, ...	3	...	...	...	...	3	2	...
16. Cowcaddens, ...	14	...	...	1	...	13	12	...
17. Woodside, ...	7	...	...	...	...	7	5	...
18. Hutchesontown, ...	11	1	1	4	...	8	8	...
19. Gorbals, ...	6	...	...	...	...	6	6	...
20. Kingston, ...	4	...	...	...	...	4	3	...
21. Govanhill, ...	4	...	...	...	...	4	3	...
22. Langside, ...	5	...	...	...	...	5	5	...
23. Pollokshields, ...	...	...	...	...	...	...	...	...
24. Kelvinside, ...	2	...	...	...	...	2	...	...
25. Maryhill, ...	8	...	...	...	...	8	8	...
26. Kinning Park, ...	1	...	...	...	...	1	1	...
Totals, ...	170	1	1	8	...	163	171	...

TABLE LIII.—GLASGOW.—POPULATION; BIRTHS and DEATHS; BIRTH-RATES and DEATH-RATES per 1,000; also DEATHS under 1 YEAR and DEATH-RATES per 1,000 BIRTHS, from 1860 to 1912.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year.	
						Number.	Rate per 1,000 Births.
1860†	389,843	15,943	12,436	40·8	31·9	2,905	182
1861	397,673	16,537	10,936	41·6	27·5	2,544	154
1862	405,789	16,400	11,565	40·4	28·5	2,562	156
1863	413,944	16,986	13,329	41·0	32·2	2,774	163
1864	420,738	17,411	13,674	41·4	32·5	3,051	175
1865	428,123	17,956	13,914	41·9	32·5	3,097	173
1866	437,850	18,288	12,829	41·8	29·3	2,905	159
1867	446,028	18,347	12,578	41·1	28·2	2,895	158
1868	455,000	18,607	13,832	40·9	30·4	3,127	168
1869	464,332	18,495	15,648	39·8	33·7	3,411	184
1870	471,453	19,355	13,955	41·1	29·6	2,991	155
1871	491,900	18,867	15,790	38·4	32·1	3,608	191
1872	494,824	20,158	14,053	40·7	28·4	3,198	159
1873	494,847	19,487	14,499	39·4	29·3	3,255	167
1874	498,270	20,039	15,845	40·2	31·8	3,240	162
1875	499,480	20,825	15,384	41·7	30·8	3,388	163
1876	502,299	20,981	13,763	41·7	27·4	3,166	151
1877	504,487	21,124	13,823	41·9	27·4	3,106	147
1878	507,420	20,622	14,157	40·6	27·9	3,285	159
1879	508,048	19,751	12,498	38·8	24·6	2,504	127
1880	509,732	18,912	13,304	37·1	26·1	2,842	150
1881	512,034	19,106	12,916	37·3	25·2	2,745	144
1882	517,904	19,735	13,046	38·1	25·2	2,959	150
1883	523,154	19,911	14,577	38·1	27·9	3,091	155
1884	528,459	20,557	13,942	38·9	26·4	3,094	151
1885	533,817	19,861	13,492	37·2	25·3	3,100	156
1886	539,231	19,862	13,104	36·8	24·3	2,786	140
1887	544,700	19,328	12,135	35·5	22·3	2,676	138
1888	550,226	19,309	11,681	35·1	21·2	2,560	133
1889	555,808	19,503	13,139	35·1	23·6	3,008	154
1890	561,447	19,279	13,374	34·3	23·8	2,880	149
1891	567,143	19,857	14,324	35·0	25·3	2,946	148
1892	669,059*	22,815	15,218	34·1	22·7	3,168	139
1893	677,883	23,173	15,798	34·2	23·3	3,649	157
1894	686,820	22,644	13,673	34·0	19·9	2,937	130
1895	695,876	22,803	16,344	32·8	23·5	3,538	155
1896	705,052	24,029	14,385	34·1	20·4	3,278	136
1897	714,919	23,880	15,727	33·4	22·0	3,826	160
1898	724,349	24,262	15,333	33·5	21·2	3,792	156
1899	733,903	24,249	15,828	33·0	21·6	3,696	152
1900	743,969	24,362	16,393	32·7	22·0	3,778	153
1901	761,925	24,206	16,197	31·8	21·2	3,607	149
1902	762,789	24,722	15,532	32·4	20·4	3,206	129
1903	763,654	25,135	15,073	32·9	19·7	3,663	146
1904	764,521	24,754	15,414	32·4	20·2	3,606	146
1905	765,389	24,316	14,460	31·8	18·9	3,195	131
1906	780,192*	24,560	14,889	31·5	19·1	3,223	131
1907	781,080	24,006	15,659	30·7	20·0	3,116	130
1908	781,969	23,915	15,265	30·6	19·5	3,284	137
1909	782,860	23,140	15,242	29·6	19·5	3,073	133
1910	783,785	22,222	13,395	28·4	17·1	2,694	121
1911	784,680	21,755	13,899	27·7	17·7	3,016	139
1912	785,600	22,044	13,797	28·1	17·6	2,740	124

\* Extended City.

† For earlier years, see Report for year 1910, Table liii.

TABLE LIV.—GLASGOW, 1912—CENSUS POPULATION: BIRTHS; ILLEGITIMATE BIRTHS; and DEATHS at all AGES and at CERTAIN PERIODS of LIFE, and their PROPORTION to the POPULATION in each MUNICIPAL WARD.

MUNICIPAL WARDS.	POPULATION.			BIRTHS.			ILLEGITIMATE BIRTHS.		DEATHS, ALL AGES.		DEATHS AT CERTAIN PERIODS OF LIFE.							
	Without Institutions and Shipping.	Institutions and Shipping.	Total.	Number.	Rate per 1,000 Living.	Number.	Percentage of Total Births.	Number.	Rate per 1,000 Living.	Under 1 Year.	1—2 Years.	2—5 Years.	5—15 Years.	15—25 Years.	25—45 Years.	45—65 Years.	65 Years and over.	
1. Dalmarnock, ...	51,252	650	51,902	1,845	35.6	106	5.7	814	15.9	207	77	63	47	37	118	152	113	
2. Calton, ...	34,612	2,370	36,982	1,089	29.4	98	9.0	731	21.1	177	72	52	42	18	93	163	114	
3. Mile-end, ...	46,034	505	46,539	1,693	36.4	88	4.2	889	19.3	251	106	72	33	47	96	171	113	
4. Whitevale, ..	31,523	1,283	32,806	1,022	31.2	66	6.5	581	18.4	154	67	59	28	22	63	97	91	
5. Dennistoun, ...	37,436	1,838	39,274	907	23.1	38	4.2	417	11.1	72	22	26	19	16	66	93	103	
6. Springburn, ...	44,680	4,421	49,101	1,612	32.8	64	4.0	735	16.4	197	83	59	43	31	122	121	79	
7. Cowlands, ...	29,991	35	29,986	942	31.4	35	3.7	389	13.0	101	29	22	24	22	48	90	53	
8. Townhead, ...	35,327	122	35,449	928	26.2	65	7.0	608	17.2	135	45	35	23	27	82	146	115	
9. Blackfriars, ...	19,407	1,231	20,638	609	29.5	83	13.6	429	22.1	109	35	23	20	29	54	97	62	
10. Exchange, ...	1,526	757	2,283	25	11.0	4	16.0	18	11.8	5	1	1	...	1	5	4	1	
11. Blythswood, ...	2,374	515	2,889	24	8.3	2	8.3	27	11.4	...	...	...	...	...	6	11	10	
12. Broomielaw, ...	6,125	1,974	8,099	184	22.7	16	8.7	137	22.4	20	21	9	7	4	26	31	19	
13. Anderston, ...	27,751	1,430	29,181	874	30.0	41	4.7	465	16.8	107	49	41	17	20	54	100	77	
14. Sandyford, ...	23,374	335	23,709	517	21.8	51	9.9	383	16.4	64	35	20	11	16	55	100	82	
15. Park, ...	22,286	1,014	23,300	214	9.2	29	13.6	261	11.7	21	...	4	8	10	39	69	110	
16. Cowcaddens, ...	33,590	1,289	34,879	1,016	29.1	151	14.9	638	19.0	128	60	32	36	49	102	138	93	
17. Woodside, ...	41,009	210	41,219	1,061	25.7	71	6.7	591	14.4	115	41	38	38	18	82	138	121	
18. Hutchesontown, ...	39,031	20	39,051	1,369	35.1	71	5.2	653	16.7	168	79	44	34	30	96	140	62	
19. Gorbals, ...	32,609	886	33,495	837	25.0	73	8.7	484	14.8	109	32	25	21	21	64	111	101	
20. Kingston, ...	32,072	934	33,006	888	26.9	74	8.3	529	16.5	104	38	29	27	23	64	151	93	
21. Govanhill, ...	35,966	...	35,966	1,118	31.1	50	4.5	499	13.9	119	35	29	24	26	76	93	97	
22. Langside, ...	40,527	636	41,163	790	19.2	20	2.5	413	10.2	46	9	4	22	11	61	109	151	
23. Pollokshields, ...	17,624	...	17,624	151	8.6	8	5.3	179	10.2	7	5	2	5	7	22	50	81	
24. Kelvinside, ...	21,205	893	22,098	258	11.7	14	5.4	169	8.0	11	3	...	1	10	14	54	76	
25. Maryhill, ...	39,672	1,531	41,203	1,296	31.4	56	4.3	558	14.1	121	39	40	27	28	77	137	89	
26. Kinning Park, ...	12,710	...	12,710	465	36.6	35	7.5	210	16.6	64	21	11	11	8	34	35	26	
— Institutions and Harbour, ...	...	...	...	78	...	63	...	953	...	55	17	21	22	39	172	323	304	
CITY, ...	759,673	24,879	784,552	21,812	27.8	1,472	6.7	12,760	16.3	2,667	1,021	761	590	570	1,791	2,924	2,436	



TABLE LV.—GLASGOW.—DEATHS at all AGES

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and Membranous Croup.	FEVERS.			Cerebro-Spinal Fever.	Measles.	Whooping-Cough.	DIGESTIVE DISEASES.		SEPTIC DISEASES.			TUBERCULOUS DISEASES.		
				Enteric.	Typhus.	Scarlet.				Diarrhoea and Enteritis.	Others.	Puerperal.	Erysipelas.	Others.	Phthisis.	Tuberculous Meningitis.	Abdominal Tuberculosis.
1. Dalmarnock, ...	814	15	2	5	5	36	12	48	23	6	1	3	61	16	11		
2. Calton, ...	731	7	2	3	2	43	13	28	15	1	4	4	53	14	11		
3. Mile-end, ...	889	16	...	8	2	50	34	41	33	1	4	6	62	17	15		
4. Whitevale, ...	581	3	2	8	3	58	15	21	22	...	3	3	38	12	11		
5. Dennistoun, ...	417	14	1	2	...	15	2	9	21	6	1	5	21	4	6		
6. Springburn, ...	735	12	4	10	2	47	10	18	23	4	1	5	55	20	7		
7. Cowlairst, ...	389	5	3	2	...	11	9	16	13	2	...	1	24	14	6		
8. Townhead, ...	608	16	1	5	1	23	13	16	19	6	6	2	38	6	10		
9. Blackfriars, ...	429	5	1	3	...	15	6	15	15	2	1	3	37	4	5		
10. Exchange, ...	18	...	...	...	...	1	...	...	3	...	...	...	3	...	...		
11. Blythswood, ...	27	...	...	...	...	...	...	...	1	...	...	...	1	...	...		
12. Broomielaw, ...	137	...	...	...	...	15	2	...	2	...	...	1	11	2	4		
13. Anderston, ...	465	6	...	...	...	39	8	11	18	1	2	4	38	7	4		
14. Sandyford, ...	383	5	1	2	1	20	13	11	17	1	3	2	18	6	3		
15. Park, ...	261	2	...	1	...	3	...	6	16	...	2	2	16	1	2		
16. Cowcaddens, ...	638	10	5	...	1	16	11	22	14	2	3	5	73	11	13		
17. Woodside, ...	591	23	5	2	...	11	13	17	23	2	1	3	38	13	8		
18. Hutchesontown, ...	653	8	3	1	3	52	23	16	14	3	3	3	61	9	5		
19. Gorbals, ...	484	3	...	3	2	13	9	14	13	...	3	1	31	10	4		
20. Kingston, ...	529	7	2	2	1	8	8	13	17	5	1	1	34	15	7		
21. Govanhill, ...	499	6	3	4	...	19	10	10	18	1	2	5	35	10	4		
22. Langside, ...	413	2	...	4	1	4	7	5	24	3	...	3	33	1	1		
23. Pollokshields, ...	179	1	2	1	...	2	1	1	5	...	1	1	7	3	...		
24. Kelvinside, ...	169	2	...	...	...	...	...	...	7	...	...	5	7	...	1		
25. Maryhill, ...	558	10	2	3	...	15	19	11	31	1	3	5	52	12	5		
26. Kinning Park, ...	210	3	...	...	...	3	3	4	12	2	1	4	13	4	6		
— Institutions and Harbour, ...	953	1	1	1	1	2	...	44	16	1	2	6	174	3	5		
CITY, ...	12,760	182	40	2	73	21	521	241	397	435	50	44	83	1,034	214	154	

TABLE LVI.—GLASGOW.—DEATH-RATES per MILLION

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and Membranous Croup.	FEVERS.			Cerebro-Spinal Fever.	Measles.	Whooping-Cough.	DIGESTIVE DISEASES.		SEPTIC DISEASES.			TUBERCULOUS DISEASES.		
				Enteric.	Typhus.	Scarlet.				Diarrhoea and Enteritis.	Others.	Puerperal.	Erysipelas.	Others.	Phthisis.	Tuberculous Meningitis.	Abdominal Tuberculosis.
1. Dalmarnock, ...	15,882	293	39	98	98	702	234	937	449	117	20	58	1,190	312	21	15	
2. Calton, ...	21,120	202	58	87	58	1,242	376	809	433	29	...	116	1,531	404	31	14	
3. Mile-End, ...	19,312	348	...	174	43	1,086	739	891	717	22	87	130	1,347	369	32	19	
4. Whitevale, ...	18,431	95	63	254	95	1,840	476	666	698	...	95	95	1,205	381	34	28	
5. Dennistoun, ...	11,139	374	27	53	...	401	53	240	561	160	27	134	561	107	16	5	
6. Springburn, ...	16,450	269	90	224	45	1,052	224	403	514	90	22	112	1,231	448	15	40	
7. Cowlairst, ...	12,988	167	100	67	...	367	300	534	434	67	...	33	801	467	20	...	
8. Townhead, ...	17,211	453	28	142	28	651	368	453	538	170	170	57	1,076	170	28	...	
9. Blackfriars, ...	22,105	258	52	155	...	773	309	773	773	103	52	155	1,906	206	25	22	
10. Exchange, ...	11,796	...	...	...	...	655	...	...	1,966	...	...	...	1,966	...	...	...	
11. Blythswood, ...	11,373	...	...	...	...	...	...	...	421	...	...	...	421	...	...	...	
12. Broomielaw, ...	22,367	...	...	...	...	2,449	327	...	327	...	...	163	1,796	327	65	32	
13. Anderston, ...	16,756	216	...	...	...	1,405	288	396	649	36	72	144	1,369	258	14	11	
14. Sandyford, ...	16,386	214	43	86	43	856	556	471	727	43	128	86	770	257	12	3	
15. Park, ...	11,711	90	...	45	...	135	...	269	718	...	90	90	718	45	...	...	
16. Cowcaddens, ...	18,994	298	149	30	30	476	327	655	417	60	89	149	2,173	327	38	20	
17. Woodside, ...	14,411	561	122	49	...	268	317	415	561	49	24	73	927	317	19	...	
18. Hutchesontown, ...	16,730	205	77	26	77	1,332	589	410	359	77	77	77	1,563	231	12	10	
19. Gorbals, ...	14,843	92	...	92	61	399	276	429	399	...	92	31	951	307	12	10	
20. Kingston, ...	16,494	218	62	62	31	249	249	405	530	156	31	31	1,060	468	21	15	
21. Govanhill, ...	13,874	169	83	111	...	528	278	278	500	28	56	139	973	278	11	19	
22. Langside, ...	10,191	49	...	99	25	99	173	123	592	74	...	74	814	25	...	...	
23. Pollokshields, ...	10,157	57	113	57	...	113	57	57	284	...	57	57	397	170	...	...	
24. Kelvinside, ...	7,970	94	...	...	...	...	...	...	330	...	...	236	330	...	...	...	
25. Maryhill, ...	14,065	252	50	76	...	378	479	277	781	25	76	126	1,311	302	12	15	
26. Kinning Park, ...	16,522	236	...	...	...	236	236	315	944	157	79	315	1,023	315	47	30	
— Institutions and Harbour, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
CITY, ...	16,264	232	51	3	93	27	664	307	506	554	64	56	106	1,318	273	18	18

## FERENT DISEASES in each MUNICIPAL WARD during 1912.

er, g- se.	Rheumatic Fever.	DISEASES OF NERVOUS SYSTEM.			Diseases of Circula- tory System.	RESPIRATORY DISEASES.			Group.	Influenza.	Violence.	Premature Birth.	Uncertified.	All others.	MUNICIPAL WARDS.
		Meningitis not Tuberculous.	Cerebral Hæmorrhage.	Others.		Pneumonia.	Bronchitis.	Others.							
...	...	23	38	28	86	86	66	17	3	1	29	45	1	108	Dalmarnock, ... 1.
...	...	18	25	28	65	90	61	12	2	1	18	28	9	139	Calton, ... 2.
...	...	11	29	36	70	103	70	16	1	2	33	37	2	143	Mile-end, ... 3.
...	...	7	25	24	59	50	40	8	2	3	19	33	1	77	Whitevale, ... 4.
...	...	5	31	19	59	35	15	14	2	2	11	12	...	79	Dennistoun, ... 5.
1	...	9	32	31	57	87	51	10	2	1	28	33	1	124	Springburn, ... 6.
...	...	6	24	12	43	48	23	7	...	1	12	10	...	78	Cowlairs, ... 7.
...	...	3	30	17	64	62	50	12	...	3	21	30	8	115	Townhead, ... 8.
...	...	4	19	15	48	58	30	9	...	...	17	23	3	62	Blackfriars, ... 9.
...	...	...	...	...	2	2	2	...	...	...	...	...	1	3	Exchange, ... 10.
...	...	...	2	...	3	3	3	1	...	1	2	...	...	5	Blythswood, ... 11.
...	...	2	3	4	20	13	12	4	...	...	3	2	5	18	Broomielaw, ... 12.
2	...	6	26	14	43	50	44	8	2	1	16	16	1	75	Anderston, ... 13.
...	...	3	22	11	53	37	34	2	...	2	13	10	1	56	Sandyford, ... 14.
...	...	2	19	13	42	13	15	2	...	1	11	4	...	57	Park, ... 15.
2	...	4	26	26	67	74	56	10	1	...	24	24	...	98	Cowcaddens, ... 16.
...	...	5	26	19	71	64	48	9	1	3	15	16	3	107	Woodside, ... 17.
...	...	15	29	22	63	98	31	9	5	2	15	21	1	101	Hutchesontown, ... 18.
1	...	6	26	22	56	64	34	14	1	2	11	19	...	88	Gorbals, ... 19.
1	...	7	27	24	60	71	36	12	2	...	16	18	...	87	Kingston, ... 20.
1	...	5	26	17	49	53	30	12	2	4	19	22	3	90	Govanhill, ... 21.
...	...	7	24	18	64	29	22	5	1	2	7	8	1	89	Langside, ... 22.
...	...	...	14	8	34	11	7	3	...	4	8	2	...	43	Pollokshields, ... 23.
1	...	1	15	5	30	11	9	4	...	2	1	4	...	45	Kelvinside, ... 24.
...	...	1	28	12	46	71	33	17	2	2	16	19	2	91	Maryhill, ... 25.
...	...	2	14	6	14	25	17	9	...	...	10	12	...	31	Kinning Park, ... 26.
...	...	...	41	39	219	70	82	10	1	2	34	10	8	122	Institutions and Harbour, ... —
9	...	152	621	470	1,487	1,378	921	236	30	42	409	458	51	2,131	CITY.

## FERENT DISEASES in each MUNICIPAL WARD during 1912.

er, g- se.	Rheumatic Fever.	DISEASES OF NERVOUS SYSTEM.			Diseases of Circula- tory System.	RESPIRATORY DISEASES.			Group.	Influenza.	Violence.	Premature Birth.	Uncertified.	All others.	MUNICIPAL WARDS.
		Meningitis not Tuberculous.	Cerebral Hæmorrhage.	Others.		Pneumonia.	Bronchitis.	Others.							
...	...	449	741	546	1,678	1,678	1,288	332	58	20	566	878	20	2,105	Dalmarnock, ... 1.
...	...	520	722	809	1,878	2,600	1,762	347	58	29	520	809	260	4,017	Calton, ... 2.
...	...	239	630	782	1,521	2,237	1,521	348	22	43	717	804	43	3,105	Mile-end, ... 3.
...	...	222	793	761	1,872	1,586	1,269	254	63	95	603	1047	32	2,443	Whitevale, ... 4.
...	...	134	828	508	1,576	935	401	374	53	53	294	321	...	2,110	Dennistoun, ... 5.
22	...	201	716	694	1,276	1,947	1,141	224	45	22	627	738	22	2,776	Springburn, ... 6.
...	...	200	801	401	1,436	1,603	768	234	...	33	401	334	...	2,605	Cowlairs, ... 7.
...	...	85	849	481	1,817	1,755	1,415	340	...	85	594	849	226	3,250	Townhead, ... 8.
...	...	206	979	773	2,473	2,989	1,546	464	...	...	876	1185	155	3,191	Blackfriars, ... 9.
...	...	...	...	...	1,311	1,311	1,311	...	...	...	...	...	655	1,966	Exchange, ... 10.
...	...	...	842	...	1,264	1,264	1,264	421	...	421	842	...	...	2,107	Blythswood, ... 11.
...	...	327	490	653	3,265	2,122	1,959	653	...	...	490	327	816	2,937	Broomielaw, ... 12.
72	...	216	937	504	1,549	1,802	1,586	288	72	26	577	577	36	2,704	Anderston, ... 13.
...	...	128	941	471	2,267	1,583	1,455	86	...	86	556	428	43	2,394	Sandyford, ... 14.
...	...	90	853	583	1,885	583	673	90	...	45	494	179	...	2,555	Park, ... 15.
60	...	119	774	774	1,995	2,203	1,667	298	30	...	714	714	...	2,918	Cowcaddens, ... 16.
...	...	122	634	463	1,731	1,561	1,170	219	24	73	366	390	73	2,609	Woodside, ... 17.
...	...	384	743	564	1,614	2,511	794	231	128	51	384	538	26	2,586	Hutchesontown, ... 18.
31	...	184	797	675	1,717	1,963	1,043	429	31	61	337	583	...	2,698	Gorbals, ... 19.
31	...	218	842	748	1,871	2,214	1,122	374	62	...	498	561	...	2,717	Kingston, ... 20.
28	...	139	723	473	1,362	1,474	834	334	56	111	528	612	83	2,500	Govanhill, ... 21.
...	...	173	592	444	1,579	716	543	123	25	49	173	197	25	2,195	Langside, ... 22.
...	...	...	794	454	1,929	624	397	170	...	227	454	113	...	2,441	Pollokshields, ... 23.
47	...	47	707	236	1,415	519	434	189	...	94	47	189	...	2,123	Kelvinside, ... 24.
...	...	25	706	303	1,160	1,790	832	429	50	50	403	479	50	2,294	Maryhill, ... 25.
...	...	157	1,101	472	1,101	1,967	1,338	708	...	...	787	944	...	2,439	Kinning Park, ... 26.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Institutions and Harbour, ... —
11	...	194	792	599	1,895	1,756	1,174	301	38	54	521	584	65	2,716	CITY.



TABLE LVII.—GLASGOW, 1912.—DEATHS OCCURRING

MUNICIPAL WARDS.	All Causes.	Smallpox.	Diphtheria and Membranous Croup.	FEVERS.			Cerebro-Spinal Fever.	Measles.	Whooping-Cough.	DIGESTIVE DISEASES.		SEPTIC DISEASES.			TUBERCULOUS DISEASES.		
				Enteric.	Typhus.	Scarlet.				Diarrhoea and Enteritis.	Others.	Puerperal.	Erysipelas.	Others.	Phthisis.	Tuberculous Meningitis.	Abdominal Tuberculosis.
1. Dalmarnock, ...	212	...	13	2	...	5	2	11	2	...	9	5	...	1	29	6	2
2. Calton, ...	205	...	6	2	...	2	1	11	3	4	8	...	...	4	26	6	3
3. Mile-End, ...	206	...	15	...	...	7	...	5	8	2	9	1	2	5	22	3	3
4. Whitevale, ...	140	...	2	2	...	8	...	16	4	4	10	...	3	3	10	7	2
5. Dennistoun, ...	85	...	12	1	...	2	...	1	...	...	8	4	1	3	3	3	1
6. Springburn, ...	169	...	12	4	...	10	1	8	3	...	10	4	...	1	16	2	...
7. Cowlares, ...	95	...	5	3	...	2	...	4	1	4	8	2	...	1	5	5	...
8. Townhead, ...	158	...	15	1	...	5	1	3	3	...	7	5	4	1	15	3	...
9. Blackfriars, ...	122	...	4	1	...	3	...	4	1	3	6	2	1	3	16	2	...
10. Exchange, ...	3	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...
11. Blythswood, ...	7	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...
12. Broomielaw, ...	40	...	...	...	...	...	...	3	...	...	2	...	...	...	2	1	...
13. Anderston, ...	101	...	4	...	...	...	...	6	1	1	8	1	1	4	9	2	1
14. Sandyford, ...	90	...	4	1	...	2	...	5	4	1	5	1	1	1	10	2	1
15. Park, ...	45	...	2	...	...	1	...	...	...	...	6	...	...	2	4	1	...
16. Cowcaddens, ...	217	...	10	4	...	1	...	6	3	4	5	2	3	4	29	4	2
17. Woodside, ...	137	...	22	5	...	2	...	...	5	2	10	2	1	2	9	1	1
18. Hutchesontown, ...	148	...	7	3	1	2	...	15	6	...	4	2	2	2	14	3	1
19. Gorbals, ...	109	...	2	...	...	3	...	5	4	1	6	...	2	1	9	3	2
20. Kingston, ...	118	...	4	1	...	2	1	2	2	1	5	5	1	1	9	2	...
21. Govanhill, ...	116	...	6	3	...	3	...	6	...	1	11	...	1	4	10	...	4
22. Langside, ...	47	...	2	...	...	3	1	...	...	...	6	1	...	2	3	...	...
23. Pollokshields, ...	15	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...
24. Kelvinside, ...	17	...	1	...	...	...	...	...	...	...	2	...	...	2	...	...	1
25. Maryhill, ...	123	...	10	2	...	3	...	4	2	2	12	1	1	1	17	...	3
26. Kinning Park, ...	59	...	3	...	...	...	...	1	...	...	1	2	1	3	4	3	1
— Institutions and Harbour, ...	819	...	1	1	1	1	...	1	...	43	14	1	2	5	170	3	4
CITY ...	3,603	...	163	36	2	68	7	117	52	73	174	41	27	56	434	63	24

TABLE LVIII.—GLASGOW.—CASES of INFECTIOUS DISEASE in each MUNICIPAL

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

MUNICIPAL WARDS.	FEVERS.																	
	Typhus.				Enteric.				Continued and Undefined.				Puerperal.		Smallpox.		Scarlet Fever.	
	Hosp.		Home.		Hosp.		Home.		Hosp.		Home.		Hosp.		Hosp.		Hosp.	
	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.
1. Dalmarnock, ...	2	...	7	1	...	...	17	1	...	...	...	...	...	...	164	2	2	4
2. Calton, ...	...	...	17	...	...	...	4	1	...	...	...	...	...	...	124	12	...	1
3. Mile-end, ...	1	...	18	...	...	...	8	1	...	...	...	...	...	...	254	4	...	1
4. Whitevale, ...	...	...	11	...	...	...	6	...	...	...	...	...	...	...	144	6	...	1
5. Dennistoun, ...	...	...	4	...	6	...	1	2	...	...	...	...	...	...	130	32	...	...
6. Springburn, ...	...	...	11	...	...	...	14	1	...	...	...	...	...	...	153	4	1	1
7. Cowlares, ...	...	...	5	1	...	...	3	...	...	...	...	...	...	...	100	2	...	...
8. Townhead, ...	...	...	11	1	...	...	7	1	...	...	...	...	...	...	97	4	...	...
9. Blackfriars, ...	6	...	6	...	...	...	5	...	...	...	...	...	...	...	62	1	...	1
10. Exchange, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
11. Blythswood, ...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	8	1	...	1
12. Broomielaw, ...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	13	...	...	...
13. Anderston, ...	...	...	5	...	...	...	3	...	...	...	...	...	...	...	55	5	...	...
14. Sandyford, ...	...	...	3	...	...	...	2	1	...	...	...	...	...	...	65	8	...	1
15. Park, ...	...	...	5	1	...	...	...	1	...	...	...	...	...	...	43	19	...	...
16. Cowcaddens, ...	...	...	18	1	...	...	8	...	...	...	...	...	...	...	56	4	...	1
17. Woodside, ...	...	...	17	...	...	...	4	1	...	...	...	...	...	...	129	8	...	...
18. Hutchesontown, ...	13	...	10	...	...	...	6	2	...	...	...	...	...	...	136	2	...	...
19. Gorbals, ...	4	...	19	...	...	...	...	...	...	...	...	...	...	...	111	4	...	2
20. Kingston, ...	3	...	5	...	...	...	8	1	...	...	...	...	...	...	116	3	1	...
21. Govanhill, ...	2	...	7	...	...	...	4	1	...	...	...	...	...	...	195	9	...	...
22. Langside, ...	1	...	4	...	...	...	1	2	...	...	...	...	...	...	139	52	1	...
23. Pollokshields, ...	...	...	6	16	...	...	1	...	...	...	...	...	...	...	28	23	...	...
24. Kelvinside, ...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	30	18	...	...
25. Maryhill, ...	...	...	10	...	...	...	10	2	...	...	...	...	...	...	159	12	...	...
26. Kinning Park, ...	...	...	6	...	1	...	2	...	...	...	...	...	...	...	38	...	...	...
— Institutions, ...	2	...	7	...	...	...	7	...	...	...	...	...	...	...	103	...	...	...
— Harbour, ...	...	...	5	3	4	...	...	...	...	...	...	...	...	...	4	...	...	...
CITY, ...	34	...	219	25	11	...	123	19	...	...	...	...	2,658	235	5	14	1,566	169



## INSTITUTIONS, NURSING HOMES, &amp;c.

Institution.	Rheumatic Fever.	DISEASES OF NERVOUS SYSTEM.				RESPIRATORY DISEASES.				Croup.	Influenza.	Violence.	Premature Birth.	Uncertified.	All others.	MUNICIPAL WARDS.
		Meningitis not Tuberculous.	Cerebral Hemorrhage.	Others.	Diseases of Circulatory System.	Pneumonia.	Bronchitis.	Others.								
...	...	6	15	9	27	13	10	3	...	...	9	5	...	24	Dalmarnock, ...	1.
...	...	...	6	2	22	20	12	4	...	...	11	3	...	33	Calton, ...	2.
...	...	1	7	3	17	16	10	4	1	1	16	4	...	27	Mile-end, ...	3.
...	...	...	5	2	15	7	5	2	...	...	7	1	...	14	Whitevale, ...	4.
...	...	1	2	1	8	3	1	1	...	...	6	...	...	17	Dennistoun, ...	5.
...	...	3	6	7	9	18	7	2	...	...	...	3	...	30	Springburn, ...	6.
...	...	2	4	3	10	5	2	2	...	...	4	1	...	17	Cowlairs, ...	7.
...	...	1	7	5	18	13	7	2	...	...	9	5	1	18	Townhead, ...	8.
...	...	2	5	3	14	9	4	2	...	...	7	4	...	14	Blackfriars, ...	9.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Exchange, ...	10.
...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	Blythswood, ...	11.
...	...	...	2	2	5	5	1	2	...	...	1	1	...	6	Broomielaw, ...	12.
...	...	...	3	1	10	10	3	3	...	...	10	1	...	12	Anderston, ...	13.
...	...	...	3	1	12	...	7	...	...	...	8	...	...	15	Sandyford, ...	14.
...	...	1	...	1	5	1	2	...	...	...	6	...	...	7	Park, ...	15.
...	...	4	12	4	21	29	15	1	...	...	11	2	...	25	Cowcaddens, ...	16.
...	...	3	6	2	15	6	3	1	1	...	6	1	...	19	Woodside, ...	17.
...	...	2	5	5	17	12	...	1	...	1	8	2	...	18	Hutchesontown, ...	18.
...	...	2	5	5	9	9	2	2	...	...	6	3	...	15	Gorbals, ...	19.
...	...	1	...	2	15	22	3	1	...	...	6	1	...	18	Kingston, ...	20.
...	...	1	2	5	10	10	2	4	...	...	9	1	...	17	Govanhill, ...	21.
...	...	...	1	1	3	2	...	1	...	...	3	...	...	11	Langside, ...	22.
...	...	...	...	...	3	2	...	1	...	...	2	...	...	3	Pollokshields, ...	23.
...	...	...	1	...	1	1	...	...	...	1	...	...	...	4	Kelvinside, ...	24.
...	...	1	3	...	9	11	3	3	...	...	5	2	...	13	Maryhill, ...	25.
...	...	...	2	...	4	10	...	2	...	...	4	2	...	10	Kinning Park, ...	26.
...	...	...	30	33	194	64	77	8	1	...	18	8	...	86	Institutions and Harbour,	—
2	31	137	94	473	298	176	52	3	3	174	50	1	473	CITY.		

RD, showing those TREATED in HOSPITAL, for the YEAR 1912.

OTHER INFECTIOUS DISEASES.											ALL CAUSES.		TOTAL CASES.	TOTAL VISITATIONS.		MUNICIPAL WARDS.
Smallpox.	Measles.		Whooping-cough.		Chickenpox.		Others. *									
Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	For Infectious Diseases	Cases found.		
...	...	...	119	793	21	143	3	161	...	...	535	1,312	1,847	10,144	56	Dalmarnock, ... 1.
...	...	...	109	677	41	92	16	60	...	...	405	1,008	1,413	6,536	73	Calton, ... 2.
...	...	...	157	868	60	241	5	203	1	...	686	1,501	2,187	9,546	55	Mile-end, ... 3.
...	...	...	125	734	27	92	2	94	...	...	398	1,055	1,453	7,100	71	Whitevale, ... 4.
...	...	...	25	731	9	47	4	111	...	...	290	1,030	1,320	5,878	105	Dennistoun, ... 5.
...	...	...	77	1,043	9	172	7	215	...	...	417	1,571	1,988	10,377	54	Springburn, ... 6.
...	...	...	26	585	10	211	...	150	...	...	255	1,025	1,280	6,922	25	Cowlairs, ... 7.
...	...	...	76	709	15	45	3	63	...	...	347	950	1,297	7,081	82	Townhead, ... 8.
...	1	...	66	243	17	55	4	63	...	...	249	443	692	5,744	18	Blackfriars, ... 9.
...	...	...	6	15	1	...	...	...	...	...	18	20	38	261	1	Exchange, ... 10.
...	...	...	1	24	...	...	...	...	...	...	14	34	48	154	...	Blythswood, ... 11.
...	...	...	20	209	3	20	...	33	...	...	63	289	352	2,686	20	Broomielaw, ... 12.
...	...	...	72	1,275	7	153	1	201	...	...	202	1,746	1,948	8,458	76	Anderston, ... 13.
...	...	...	63	569	10	45	1	56	1	...	196	766	962	6,146	141	Sandyford, ... 14.
...	...	...	25	158	1	22	1	18	...	...	134	275	409	1,836	36	Park, ... 15.
...	...	...	100	452	43	192	8	130	2	...	398	945	1,343	10,423	57	Cowcaddens, ... 16.
...	...	...	33	639	36	264	2	144	...	...	398	1,182	1,580	8,869	26	Woodside, ... 17.
...	...	...	96	936	57	223	8	124	...	...	441	1,442	1,883	12,492	58	Hutchesontown, ... 18.
...	...	...	37	269	18	188	2	85	...	...	251	682	933	5,672	37	Gorbals, ... 19.
...	...	...	29	297	31	166	2	121	5	...	283	709	992	5,998	27	Kingston, ... 20.
...	...	...	38	579	18	245	...	230	...	...	337	1,188	1,525	8,053	82	Govanhill, ... 21.
...	...	...	2	288	...	168	1	63	...	...	210	711	921	5,787	...	Langside ... 22.
...	...	...	11	85	...	29	...	28	...	...	58	226	284	1,471	...	Pollokshields, ... 23.
...	...	...	40	179	...	15	...	13	...	...	96	278	374	2,577	29	Kelvinside, ... 24.
...	...	...	54	975	25	523	3	161	...	...	365	1,809	2,174	13,768	252	Maryhill, ... 25.
...	...	...	12	41	2	30	...	24	...	...	91	137	228	7,803	3	Kinning Park, ... 26.
...	1	...	194	15	16	1	91	9	3	...	777	92	869	879	8	Institutions, —
...	...	...	17	2	3	...	14	...	2	...	64	7	71	4,329	...	Harbour, —
...	2	...	1,630	13,390	480	3,382	178	2,560	14	...	7,978	22,433	30,411	176,990	1,392	CITY.

\*Trachoma, British Cholera, Mumps, and Dysentery.

TABLE LIX.—GLASGOW.—CASES of INFECTIOUS DISEASE REGISTERED, showing the NUMBER TREATED in HOSPITAL for each MONTH of the YEAR 1912.

MONTHS.	INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.														OTHER INFECTIOUS DISEASES.										TOTAL.											
	FEVERS.						Smallpox.		Scarlet Fever.		Cerebro. Spinal Fever.		Diphtheria and Membranous Group.		Erysipelas.		Phthisis.		Ophthalmia Neonatorum.		Berl-berl.		Anthrax.				Measles.		Whooping-cough.		Chickenpox.		•Others.			
	Typhus.		Enteric.		Continued and Undefined.																				Puerperal.											
	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.	Hosp.	Home.		
Jan.,	1	...	17	1	1	...	9	...	224	36	...	...	181	13	39	66	67	119	...	16	1	...	...	...	406	4,201	29	197	11	267	1	...	...	987	4,916	
Feb.,	...	...	18	4	...	...	18	1	197	21	...	...	147	23	34	66	84	173	...	19	...	...	...	...	368	3,665	16	173	14	235	...	...	...	896	4,380	
March,	3	...	49	1	...	...	8	2	199	18	...	...	144	24	30	63	71	175	...	20	...	...	...	...	255	2,211	25	154	18	238	1	...	...	803	2,906	
April,	...	...	13	2	...	...	14	1	148	15	1	...	104	10	32	44	59	150	2	15	1	...	1	...	170	878	29	107	18	160	...	...	...	592	1,382	
May,	...	...	24	14	...	...	9	3	204	18	2	...	116	15	33	46	75	165	...	18	...	...	...	...	103	460	29	246	23	218	2	...	...	620	1,205	
June,	23	...	11	...	...	...	8	1	144	18	1	...	98	5	24	42	50	102	1	10	1	...	...	...	70	262	30	122	19	219	...	...	...	480	782	
July,	7	...	17	...	...	...	5	2	157	14	...	...	5	109	5	29	53	43	116	...	13	1	...	...	45	127	40	58	14	37	1	...	...	468	430	
Aug.,	...	...	24	1	1	...	12	1	185	10	...	...	1	120	13	22	48	47	148	1	20	...	...	...	12	68	34	115	8	38	...	...	...	466	463	
Sept.,	...	...	21	...	3	...	7	3	264	14	1	...	3	159	8	23	71	37	146	...	25	...	...	...	10	51	37	205	3	140	5	...	...	570	666	
Oct.,	...	...	3	...	6	...	8	4	389	42	...	...	2	162	21	47	81	37	140	2	16	1	...	1	...	20	280	41	369	11	381	1	...	...	729	1,336
Nov.,	...	...	8	1	...	...	15	...	309	20	...	...	...	125	17	48	98	37	136	...	24	...	...	...	80	473	82	699	21	336	3	...	...	728	1,804	
Dec.,	...	...	14	1	...	...	10	1	238	9	...	...	...	101	15	38	59	41	122	...	14	...	...	...	91	714	88	937	18	291	...	...	...	639	2,163	
TOTAL,	34	...	219	25	11	...	123	19	2658	235	5	14	1566	169	399	737	648	1692	6	210	5	...	2	...	1630	13,390	480	3382	178	2560	14	...	...	7978	22,433	

\* Trachoma, British Cholera, Mumps, and Dysentery.

TABLE LX.—GLASGOW, 1912.—DEATHS CERTIFIED AND OTHERWISE IN each MUNICIPAL WARD.

MUNICIPAL WARDS.	DEATHS CERTIFIED AND OTHERWISE.						DEATHS UNDER 5 YEARS.				LEGITIMATE.				ILLEGITIMATE.					
	Certified.		Not Certified.		No Medical Attendance.		Dispensary.		Under 1 year.		1 and under 5 years.		Under 1 year.		1 and under 5 years.		Under 1 year.		1 and under 5 years.	
	Under 5 yrs. & up.	5 yrs. & up.	Under 5 yrs. & up.	5 yrs. & up.	Under 5 yrs. & up.	5 yrs. & up.	Under 5 yrs. & up.	5 yrs. & up.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.
	Under 5 yrs. & up.	5 yrs. & up.	Under 5 yrs. & up.	5 yrs. & up.	Under 5 yrs. & up.	5 yrs. & up.	Under 5 yrs. & up.	5 yrs. & up.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.	Number.	Certified.
1. Dalmarnock, ...	340	464	2	3	5	...	...	...	207	200	140	140	183	177	132	132	24	23	18	8
2. Calton, ...	282	420	15	10	4	...	...	...	177	164	124	118	160	150	113	109	17	14	11	9
3. Mile-end, ...	415	456	8	4	4	...	...	...	251	239	178	177	232	220	173	173	19	19	5	4
4. Whitevale, ...	274	298	3	3	2	...	...	...	154	151	126	123	148	146	114	112	6	5	12	11
5. Dennistoun, ...	119	297	...	...	1	...	...	...	72	71	48	48	65	65	47	47	7	6	1	1
6. Springburn, ...	335	395	1	1	3	...	...	...	197	193	142	142	179	176	140	140	18	17	2	2
7. Cowlairs, ...	150	237	1	...	1	...	...	...	101	99	51	51	97	95	48	48	4	4	3	3
8. Townhead, ...	207	389	6	4	2	...	...	...	135	129	80	78	126	120	78	76	9	9	2	2
9. Blackfriars, ...	162	255	2	6	...	...	...	...	109	105	58	57	86	85	51	51	23	20	7	6
10. Exchange, ...	7	11	...	...	...	...	...	...	5	5	2	2	5	5	2	2	...	...	...	...
11. Blythswood, ...	...	27	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Broomielaw, ...	43	85	4	1	...	...	...	...	20	14	30	29	15	13	30	29	5	1	...	...
13. Anderston, ...	191	268	1	...	3	...	...	...	107	101	90	90	97	94	85	85	10	7	5	5
14. Sandyford, ...	118	263	...	1	1	...	...	...	64	63	55	55	59	58	51	51	5	5	4	4
15. Park, ...	24	236	...	...	1	...	...	...	21	20	4	4	17	17	4	4	4	3	...	...
16. Cowcaddens, ...	204	412	1	2	13	4	2	...	128	118	92	86	115	107	85	79	13	11	7	7
17. Woodside, ...	190	389	...	7	3	1	1	...	115	111	123	123	104	100	76	76	11	11	3	3
18. Hutchesontown, ...	287	361	1	1	1	...	2	...	168	166	79	77	161	160	116	114	7	6	7	7
19. Gorbals, ...	160	314	3	3	2	1	1	...	109	104	57	56	98	93	54	53	11	11	3	3
20. Kingston, ...	161	354	3	4	3	...	4	...	104	98	67	63	91	86	62	60	13	12	5	3
21. Govanhill, ...	180	314	1	2	...	...	2	...	119	118	64	62	112	112	61	59	7	6	3	3
22. Langside, ...	59	352	...	2	...	...	...	...	46	46	13	13	44	44	13	13	2	2	...	...
23. Pollokshields, ...	14	165	...	...	...	...	...	...	7	7	7	7	6	6	7	7	1	1	...	...
24. Kelvinside, ...	14	155	...	...	...	...	...	...	11	11	3	3	9	9	3	3	2	2	...	...
25. Maryhill, ...	199	358	1	...	...	...	...	...	121	120	79	79	110	109	78	78	11	11	1	1
26. Kinning Park, ...	91	114	2	...	3	...	...	...	64	59	32	32	56	51	31	31	8	8	1	1
— Institutions and Harbour,	92	838	1	22	...	...	...	...	55	54	38	38	19	18	28	28	36	36	10	10
CITY,	4,319	8,227	56	76	52	8	22	...	2,667	2,566	1,782	1,753	2,394	2,316	1,682	1,660	273	250	100	93



TABLE LXI.—GLASGOW, 1912.—DEATHS in FRIENDLY SOCIETIES in each MUNICIPAL WARD.

MUNICIPAL WARDS.					Under 1 Year.		1 and under 5 Years.		5 Years and over.	TOTAL.
					Legitimate.	Illegitimate.	Legitimate.	Illegitimate.		
1.	Dalmarnock,	...	...	...	91	6	111	2	431	641
2.	Calton,	...	...	...	62	...	87	5	340	494
3.	Mile-end,	...	...	...	103	2	152	1	389	647
4.	Whitevale,	...	...	...	75	2	90	3	251	421
5.	Dennistoun,	...	...	...	26	2	38	...	229	295
6.	Springburn,	...	...	...	98	2	120	1	349	570
7.	Cowlairs,	...	...	...	47	...	42	1	214	304
8.	Townhead,	...	...	...	60	2	62	...	311	435
9.	Blackfriars,	...	...	...	40	2	42	2	204	290
10.	Exchange,	...	...	...	2	...	1	...	6	9
11.	Blythswood,	...	...	...	...	...	...	...	14	14
12.	Broomielaw,	...	...	...	5	...	22	...	54	81
13.	Anderston,	...	...	...	43	2	71	2	228	346
14.	Sandyford,	...	...	...	26	3	26	2	209	266
15.	Park,	...	...	...	5	...	2	...	113	120
16.	Cowcaddens,	...	...	...	49	1	65	4	321	440
17.	Woodside,	...	...	...	39	...	65	3	310	417
18.	Hutchesontown,	...	...	...	73	1	101	2	304	481
19.	Gorbals,	...	...	...	33	1	36	1	237	308
20.	Kingston,	...	...	...	45	4	49	1	277	376
21.	Govanhill,	...	...	...	36	...	48	...	229	313
22.	Langside,	...	...	...	5	...	7	...	77	89
23.	Pollokshields,	...	...	...	...	1	4	...	59	64
24.	Kelvinside,	...	...	...	1	...	...	...	40	41
25.	Maryhill,	...	...	...	38	...	66	1	281	386
26.	Kinning Park,	...	...	...	29	2	25	...	94	150
—	Institutions and Harbour,	...	...	...	5	...	6	...	345	356
CITY,					1,036	33	1,338	31	5,916	8,354

TABLE LXII.—HOSPITAL BED ACCOMMODATION for INFECTIOUS DISEASES in GLASGOW since 1865.

YEAR.	PARISH.			Glasgow Royal Infirmary.	LOCAL AUTHORITY.				Total Beds.	Population in Thousands.	Beds per Thousand.
	City.	Barony.	Govan.		Parliamentary Road.	Belvidere Fever.	Belvidere Small-pox.	Ruchill.			
1865	100	120	54	200	136	...	...	...	610	428	1·4
1866	100	120	54	175	136	...	...	...	585	438	1·3
1867	...	120	54	100	136	...	...	...	410	446	0·9
1869	...	120	54	135	136	...	...	...	445	464	1·0
1870	...	120	54	100	250	250	...	...	774	471	1·7
1872	...	120	...	100	250	250	...	...	720	495	1·4
1875	...	...	...	100	250	250	...	...	600	500	1·2
1876	...	...	...	...	250	250	...	...	500	502	1·0
1878	...	...	...	...	120	250	150	...	520	507	1·0
1880	...	...	...	...	120	250	150	...	520	510	1·0
1881	...	...	...	...	120	370	150	...	640	512	1·2
1882	...	...	...	...	120	220	150	...	490	518	1·0
1887	...	...	...	...	120	390	150	...	660	545	1·2
1893	...	...	...	...	200	390	150	...	740	678	1·1
1900	...	...	...	...	200	390	150	440	1,180	744	1·6
1901	...	...	...	...	200	390	220	440	1,250	764	1·6
1906	...	...	...	...	...	390	220	440	1,050	836	1·3
1910	...	...	...	...	...	390	220	542	1,152	884	1·3

TABLE LXIII.—CITY of GLASGOW FEVER and SMALLPOX HOSPITALS.—NUMBER, AVERAGE RESIDENCE, and COST of TREATMENT OF PATIENTS from 1883-84.

Year.	PATIENTS.			Total Ordinary Expenditure.	Average Daily Cost per Patient.	Average Cost of Treatment per Patient.	Average Cost of Bed per Year.
	Total under Treatment.	Average Daily Number in Hospitals.	Average Residence in Days.				
				£ s. d.	£ s. d.	£ s. d.	£ s. d.
1883-84	3,200	338	41·7	15,772 0 0	0 2 6·6	5 6 4·0	46 10 9·0
1884-85	3,828	355	38·1	19,754 6 7	0 2 11·0	5 11 1·5	53 4 7·0
1885-86	2,154	215	40·3	15,550 6 6	0 3 11·5	7 19 6·2	72 4 9·5
1886-87	2,993	332	43·3	16,504 3 5	0 2 8·7	5 17 11·9	49 14 7·5
1887-88	3,056	327	42·5	17,768 17 10	0 2 11·6	6 6 1·0	54 5 9·6
1888-89	3,459	357	41·7	18,171 15 6	0 2 9·5	5 16 4·9	50 18 11·5
1889-90	3,582	361	36·8	17,899 7 3	0 2 8·6	4 19 11·7	49 11 7·0
1890-91	4,286	460	39·2	21,092 15 11	0 2 6·1	4 18 5·9	45 17 0·7
1891-92	4,850	491	37·1	26,808 9 7	0 2 11·8	5 10 8·2	54 11 10·8
1892-93	6,749	699	37·8	36,263 18 8	0 2 10·1	5 7 5·4	51 17 6·1
1893-94	5,528	624	41·2	34,551 14 3	0 3 0·5	6 5 2·6	55 9 3·5
1894-95	5,482	644	42·9	34,039 19 0	0 2 10·8	6 4 2·2	52 17 3·4
1895-96	5,127	651	46·5	34,892 12 8	0 2 11·1	6 16 1·5	53 11 5·6
1896-97	5,468	627	41·9	34,224 14 9	0 2 11·9	6 5 2·5	54 11 0·5
1897-98	5,687	709	45·5	36,972 18 10	0 2 10·3	6 10 0·3	52 3 5·7
1898-99	5,956	833	45·3	39,261 9 2	0 2 7·0	5 16 11·8	47 2 7·3
1899- 1900 }	6,663	923	44·8	42,020 9 11	0 2 5·9	5 11 10·0	45 10 8·2
1900-01	8,888	1,031	42·3	69,015 8 6	0 3 8·0	7 15 1·9	66 18 9·8
1901-02	6,990	772	40·3	64,265 12 10	0 4 6·7	9 3 10·6	83 5 0·1
1902-03	4,882	592	44·3	53,185 12 10	0 4 11·1	10 17 10·6	89 17 2·8
1903-04	6,799	720	38·8	55,961 2 10	0 4 3·0	8 4 9·6	77 14 7·0
1904-05	5,484	576	36·3	52,558 11 4	0 5 0·0	9 1 5·0	91 5 0·0
1905-06	5,902	620	38·3	52,052 12 7	0 4 7·2	8 16 2·2	83 19 0·0
1906-07	6,803	766	41·1	54,325 19 6	0 3 10·6	7 19 8·5	70 18 4·0
1907-08	9,087	942	40·6	62,659 4 7	0 3 7·6	7 7 7·0	66 10 4·9
1908-09	8,558	1,019	47·9	67,905 6 2	0 3 7·8	8 15 2·0	66 12 10·3
1909-10	10,497	1,243	48·2	77,751 19 6	0 3 5·1	8 5 2·0	62 15 6·0
1910-11	9,329	1,187	56·7	75,967 4 2	0 3 6·1	9 18 10·2	64 0 0·0
1911-12	10,213	1,100	43·5	76,392 11 3	0 3 9·5	8 4 10·7	69 8 11·6
1912-13	8,316	971	47·1	77,964 10 3	0 4 4·8	10 7 3·9	80 5 10·3

N.B.—The above calculations of cost do not include interest on capital expended in erecting Hospitals.

TABLE LXIV.—CITY of GLASGOW FEVER and SMALLPOX HOSPITALS.—STATEMENT showing PATIENTS CLASSIFIED as to DISEASE, AVERAGE RESIDENCE, and AVERAGE COST per PATIENT for each YEAR from 1883-84.

Year.	SCARLET FEVER.		ENTERIC FEVER.		WHOOPIING-COUGH.		TYPHUS.		MEASLES.		OTHER INFECTIOUS DISEASES.*		SMALLPOX.		ALL OTHER DISEASES.†	
	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.	Average Residence (Days).	Average Cost per Patient.
1888-89	56.7	£ s. D. 7 18 3.4	52.5	£ s. D. 7 6 6.7	50.1	£ s. D. 6 19 10.3	34.2	£ s. D. 4 15 5.7	26.6	£ s. D. 3 14 3.1	28.3	£ s. D. 3 19 0.0	18.5	£ s. D. 2 11 7.7	23.9	£ s. D. 3 6 8.6
1889-90	54.4	7 7 9.4	50.2	6 16 4.5	53.0	7 3 11.8	34.9	4 14 9.7	30.6	4 3 1.6	21.4	2 18 1.6	24.0	3 5 2.4	22.5	3 1 1.5
1890-91	54.3	6 16 5.1	49.0	6 3 1.3	40.3	5 1 3.0	32.4	4 1 4.9	25.4	3 3 9.8	25.2	3 3 3.8	24.0	3 0 3.6	25.4	3 3 9.8
1891-92	53.7	8 0 2.5	49.3	7 7 0.9	43.8	6 10 10.0	31.3	4 13 4.5	26.2	3 18 2.0	22.9	3 8 3.8	38.0	5 13 4.4	20.8	3 2 0.6
1892-93	50.6	7 3 10.0	49.1	6 19 6.8	42.6	6 1 1.1	32.8	4 13 2.8	26.1	3 14 2.3	20.0	2 16 10.2	30.0	4 5 3.3	20.2	2 17 5.0
1893-94	52.7	8 0 2.0	52.5	7 19 6.7	51.0	7 15 0.0	34.8	5 5 9.2	27.7	4 4 2.2	22.4	3 8 0.9	42.2	6 8 3.0	23.1	3 10 2.5
1894-95	57.4	8 6 3.2	51.8	7 10 0.6	61.0	8 16 8.4	34.8	5 0 9.6	27.7	4 0 2.8	26.2	3 15 10.7	30.4	4 8 0.7	27.1	3 18 6.0
1895-96	57.7	8 8 11.0	57.2	8 7 5.4	54.1	7 18 4.5	33.1	4 16 10.8	29.2	4 5 5.8	31.2	4 11 4.1	30.1	4 8 1.4	29.4	4 6 0.8
1896-97	58.1	8 13 8.0	55.3	8 5 3.6	53.5	7 19 11.0	28.8	4 6 1.1	29.3	4 7 7.0	32.6	4 17 5.4	31.5	4 14 1.9	28.1	4 3 11.9
1897-98	59.9	8 11 2.9	54.7	7 16 4.5	58.1	8 6 1.2	43.1	6 3 2.6	29.2	4 3 5.7	36.3	5 3 9.3	31.0	4 8 7.5	31.3	4 9 5.8
1898-99	58.7	7 11 7.1	55.4	7 3 0.8	54.9	7 1 9.3	35.7	4 12 2.3	29.6	3 16 5.3	33.8	4 7 3.5	...	...	29.6	3 16 5.3
1899-1900	59.3	7 7 11.4	55.7	6 18 11.7	54.4	6 15 8.7	33.4	4 3 4.0	27.8	3 9 5.3	34.9	4 7 0.9	22.6	2 16 4.6	28.6	3 11 4.3
1900-01	58.7	10 15 3.7	56.7	10 7 11.7	51.1	19 7 5.2	33.2	6 1 9.3	26.0	4 15 4.4	38.7	7 1 11.4	28.1	5 3 0.9	30.0	5 10 0.5
1901-02	53.5	12 4 0.6	53.8	12 5 5.0	58.9	3 8 8.2	30.4	6 18 8.1	30.5	6 19 1.6	35.2	8 0 6.9	30.4	6 18 8.1	32.8	7 9 7.5
1902-03	57.9	14 5 1.3	51.6	12 14 1.0	60.8	14 19 4.7	44.0	10 16 8.0	31.6	7 15 7.2	35.5	8 14 9.7	26.1	6 8 6.3	31.4	7 14 7.4
1903-04	55.9	11 17 5.2	56.3	11 19 1.6	49.2	10 8 11.7	33.9	7 3 11.9	27.8	5 18 1.0	33.7	7 3 1.7	29.6	6 5 8.7	27.9	5 18 6.1
1904-05	54.3	13 11 5.0	57.3	14 6 5.0	43.4	10 17 0.0	32.0	8 0 0.0	27.0	6 15 0.0	34.5	8 12 5.0	27.3	6 16 5.0	29.2	7 6 0.0
1905-06	53.9	12 17 11.3	57.6	13 14 11.5	44.7	10 5 7.4	38.4	8 16 7.7	34.0	7 16 4.8	29.3	6 14 9.4	60.6	13 18 9.1	30.1	6 18 5.5
1906-07	50.7	9 16 10.7	49.8	9 13 8.0	47.5	9 4 8.8	80.5	15 12 9.7	27.3	5 6 0.3	43.3	8 8 0.7	74.5	14 9 5.9	13.3	2 11 7.7
1907-08	56.2	10 4 5.0	55.7	10 2 6.1	49.4	8 19 8.6	25.9	4 13 11.6	30.9	5 12 3.0	37.3	6 15 7.5	35.0	6 7 2.7	25.8	4 13 9.8
1908-09	55.3	10 2 0.6	53.9	9 16 9.9	52.8	9 12 11.4	35.7	6 10 2.6	35.2	6 8 5.6	37.9	6 18 6.1	29.0	5 5 10.8	28.7	5 4 7.4
1909-10	59.3	10 3 3.8	56.4	9 13 4.5	67.5	11 11 6.3	51.8	8 17 7.4	31.0	5 6 2.6	42.4	7 5 3.1	...	...	26.4	4 10 5.0
1910-11	61.7	10 16 5.2	59.7	10 9 4.1	57.1	10 0 5.2	31.4	5 10 1.9	37.5	6 11 7.6	57.6	10 2 0.5	46.0	8 1 2.6	27.9	4 17 11.1
1911-12	56.8	10 15 6.2	56.1	10 12 11.7	56.6	10 14 10.0	29.0	5 10 0.7	27.0	5 2 4.2	42.3	8 0 6.3	...	...	27.7	5 5 2.8
1912-13	57.3	12 11 10.8	58.4	12 17 0.1	50.4	11 1 8.1	33.3	7 6 4.1	28.2	6 4 3.1	44.9	9 17 4.6	...	...	28.9	6 7 0.3

\* Includes Erysipelas, Diphtheria, Chickenpox, and Puerperal Fever. † Includes Nursing Mothers, besides persons sent in by mistaken Diagnosis.

§ For earlier years see Report for year 1910, Table lxiii.

N. B.—The above Calculations do not include Interest on Capital expended in erecting Hospitals.



TABLE LXV.

## City of Glasgow Fever and Smallpox Hospitals.

## RETURN BY THE MEDICAL OFFICER OF HEALTH

Showing Number, Average Residence, and Cost of Treatment of Patients,  
1912-1913.

ORDINARY NETT EXPENDITURE, as per Treasurer's Statement \* :—

Fever Hospital, Belvidere, ... ..	£37,476	2	11
Smallpox Hospital, Belvidere, ... ..	1,103	8	3
Fever Hospital, Ruchill, ... ..	39,384	19	1
	<u>£77,964</u>	<u>10</u>	<u>3</u>

\* The Ordinary Expenditure on all the Hospitals has been thrown together. There is a certain amount of community in the Expenditure which could not be unravelled without trouble quite out of proportion to any result.

Average daily number of Patients in Fever Hospital, Belvidere, ...	472
Average daily number of Patients in Smallpox Hospital, Belvidere, ...	14
Average daily number of Patients in Fever Hospital, Ruchill, ...	485
Average daily number of Patients in Hospitals, ...	<u>971</u>

	FEVER HOSPITAL.	BELVIDERE SMALLPOX HOSPITAL.	RUCHILL HOSPITAL.	TOTAL.
Patients remaining at 31st May, 1912, ... ..	415	20	390	825
Patients admitted during 1912-1913, ... ..	3,710	149	3,632	7,491
Total under Treatment, 1912-1913, ...	4,125	169	4,022	8,316
Patients dismissed during 1912-1913, ...	3,602	164	3,503	7,269
Patients remaining at 31st May, 1913, ...	523	5	519	1,047

Average Residence of Patients dismissed, ... .. 47·12 days.

Average Daily Expenditure, ... ..	£213	12	0
Average Daily Cost per Patient, ... ..	0	4	4·80
Average Cost of Treatment per Patient, ... ..	10	7	3·94
Average Cost of Bed per Year, ... ..	80	5	10·31

STATEMENT SHOWING PATIENTS CLASSIFIED AS TO DISEASE, AVERAGE RESIDENCE OF PATIENTS  
DISMISSED, AND AVERAGE COST AT THE DAILY RATE GIVEN ABOVE—

DISEASE.	No. DISMISSED.	AVERAGE RESIDENCE.	AVERAGE COST.
Scarlet Fever, ... ..	2,593	57·25 days.	£12 11 10·80
Bacterial Fever, ... ..	174	58·41 „	12 17 0·05
Whooping-cough, ... ..	866	50·38 „	11 1 8·06
Erysipelas, ... ..	34	33·26 „	7 6 4·13
Measles, ... ..	1,005	28·24 „	6 4 3·07
Diphtheria, ... ..	75	56·45 „	12 8 4·56
Other Infectious Diseases,* ... ..	2,109	44·86 „	9 17 4·61
Smallpox, ... ..	...	...	...
Other Diseases,† ... ..	413	28·87 „	6 7 0·34
Total Cases, ... ..	<u>7,269</u>		

\* Includes Erysipelas, Diphtheria, Chickenpox, Puerperal and Cerebro-Spinal Fevers.

† Includes Nursing Mothers, besides Persons sent in by mistaken diagnosis.

The above calculations of cost do not include Interest on Capital expended in erecting Hospitals.

A. K. CHALMERS,  
Medical Officer of Health.

## APPENDIX II.

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 THE HOUSE AS A CONTRIBUTORY FACTOR IN THE DEATH-RATE.<sup>(1)</sup>


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THE influence of the house on the health of its inmates is no new theme. It has frequently been discussed in relation to surface density (the number of houses or persons on a limited area), and in relation to the cubic space within the dwelling. I propose to-night to ask your attention to it from the point of view of the age of its inhabitants.

At the 1901 census I had an opportunity of comparing the death-rates obtaining in our Glasgow population among the inmates of houses of several sizes—*i.e.*, according to whether they occupied one, two, three, or four and more rooms, and what seemed to demand an explanation was the very considerable interval which separated the rate obtaining among the occupants of the one-roomed house from those occupying two apartments, but more especially from those occupying three apartments and upwards. For example, among the one-apartment population, which numbered over 100,000 persons, the death-rate approached 33 per 1,000; the two-apartment population approached 350,000 and had a death-rate of 21 per 1,000; in nearly 152,000 persons occupying three-apartment houses the death-rate was under 14 per 1,000; while in over 136,000 persons occupying houses of four apartments and upwards it was only 11 per 1,000.

The difference between the extremes was so great as to suggest a discrepancy in the units compared, but lack of information regarding the age-distribution of the several populations made it impossible to carry the comparison beyond a simple statement of the relative prevalence of certain groups of disease among them. It was thus possible to show for the zymotic group (as then understood), for phthisis, and for the other diseases of respiration separately, that the rate followed the direction of the general death-rate—in other words, that the death-rate increased as the size of house diminished.

The element which was lacking in the 1901 enquiry I have now been able to obtain from the 1911 census, and the first scrutiny of the age-distribution suggested that a very considerable portion of the differences in the death-rate could be ascribed to the larger proportion of children in the smaller houses. It showed, for example, that while 11 per cent. of the total population consisted of children under 5 years, in the one-apartment population they formed almost 19 per cent., and in the two-apartment almost 14 per cent.; while in houses of three and four apartments and upwards the proportions were 7 and 4 per cent. respectively. A further point of importance emerged when the deaths were cast for these several groups of the population in the disclosure that even when corrected for age-distribution the death-rate of the population occupying four apartments and upwards was slightly under 12 per 1,000 (in a population of over 160,000), a quite unlikely, if not indeed a wholly impossible rate in any mixed population living under existing conditions. Both together inevitably raised the question whether it was possible to get any nearer the true significance of the relationship between house-room and death-rate, and I propose submitting for your consideration some features of the analysis which was undertaken in the endeavour to throw light on this question.

Few words are necessary to indicate the volume of the material employed. The census population (784,496) was taken as the central population of a period of three years, and the deaths were those occurring throughout a period of eighteen months on each side of the census date. The total deaths exceeded 39,000, and the aggregate population during the period

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<sup>(1)</sup> A paper read before the Royal Society of Medicine, London, April, 1913.

exceeded 2,350,000. The age- and sex-distribution of the population occupying houses of the several sizes I have mentioned had been extracted for local purposes,<sup>1</sup> the ages being in twelve age-groups and the occupants of all houses of four apartments and upwards being taken together. The deaths were now similarly distributed, save in the first instance, those occurring in institutions and having no home address to which they could be allocated. To this I shall return.

Having reached this point, we were in a position to ask whether a comparison with the corresponding rates for 1901 afforded any information regarding the distribution of the reduction of the general death-rate which had characterized the period generally. In 1901 the death-rate for the city as a whole and for all ages and both sexes was 20·6 per 1,000; in 1911 it was 16·6, a reduction of over 19 per cent. Could it be demonstrated that this reduction had been shared in equal degrees by all sections of the population? Subject to explanation afterwards I introduce the following table—

REDUCTION IN DEATH-RATE DURING THE DECADE ACCORDING TO SIZE OF HOUSE.

*Death-rate from all causes in houses of several sizes.*

	Census population.		Deaths.		Death-rate.		
	1901.	1911.	1901.	1909-12.*	1901.	1909-12.	Per cent. decrease
1 apartment, ...	104,128	104,641	3,405	8,161	32·7	25·9	20·8
2 apartments, ...	348,731	367,341	7,418	18,287	21·3	16·5	22·5
3 apartments, ...	151,754	160,083	2,081	5,515	13·7	11·5	16·0
4 apartments and upwards, ...	136,511	127,549	1,533	4,119	11·2	10·8	3·6
Institutions and harbour, ...	20,588	24,882	1,072	2,942	52·3	39·3	24·9
Not traced, ...	—	—	207	—	—	—	—
City, ...	761,712	784,496	15,716	39,024	20·6	16·6	19·4

\* Fourth quarter, 1909; first three quarters, 1912.

What significance are we to attach to this reduction in the general death-rate by almost one-fifth in ten years? Before considering this, certain changes in the age-distribution of the population are to be noted. Between 1901 and 1911 the population of Glasgow increased by barely 9,000,<sup>2</sup> but the increases were confined to age-periods over 35 years, save at ages 10 to 15 in males and 5 to 15 in females. In both the increase was purely nominal (0·1 and 0·69 per cent.), while of greater importance is the reduction at ages under 5, which in number amounted to 4,752, and represented a reduction of 5 per cent. on the 1901 population at these ages. In relation, however, to the total population this reduction was only about  $\frac{2}{3}$  per cent., and as during the last twenty-five years the death-rate of children under 5 has fallen from 86<sup>3</sup> to 60 per 1,000 for boys and from 76 to 49 for girls, there is ground for regarding the decline in the death-rate of the last decennium as resulting to a considerable extent from a reduction in the rate among the inhabitants of the smaller-sized houses. This view is, I think, supported by the even greater decline in the death-rate of the institutional group, for, as we shall see, there are certain anomalies in the rates for the higher ages in small houses which arise, I think, from a drift of the sick and infirm among their population in the direction of institutions in later life.

<sup>1</sup> Census Report, 1911. Glasgow and its Municipal Wards. By the Medical Officer of Health.

<sup>2</sup> Within the area as at 1911.

<sup>3</sup> A new Life Table for Glasgow, based on the mortality of the ten years, 1881-90, by A. K. Chalmers, M.D., D.P.H.



In his address as President of the Preventive Medicine Section of the York Congress of the Royal Sanitary Institute, Sir Shirley Murphy approached this question of the incidence of the decline in the death-rate on the basis of the proportion of children of school age attending elementary schools, and regarded the evidence as suggesting not only that the decline in the death-rate in the total population might in part be related to improved environment, but that it was progressing more rapidly among the lower social grades. The preceding table shows a reduction which amounts to over 22 per cent. in our two-apartment houses, but falls to less than four in houses of four apartments and upwards. Our birth-rate fell by fully 12 per cent. during the decade, but the difference in the proportion of children under 5 in the two periods was less than 1 per cent., and difference in age-distribution alone will not account for the decrease.

#### AGE- AND SEX-DISTRIBUTION.

Meanwhile, in order to disintegrate the effect of age and sex, I insert the death-rates for males and females arranged in age-periods and grouped according to the size of house occupied.

Here the sexes, taken separately, maintain the features of their combined death-rate, in relation to the size of house. Females at all ages have a rate of 25 per 1,000 in one-apartment houses; 16 in two-apartment houses; 11 in three-apartment houses; 9 in houses of four apartments and upwards; and 45 in institutions. For males the corresponding rates are 27, 17, 12, 13, and 37.

At each age-period also, as a rule, the death-rate is lower as the house increases in size, the main differences being at the later ages when, as I have suggested, the drift to institutions has become established. The exceptions otherwise have usually an obvious explanation. For example, the rate for male at ages 35 to 45 in four-apartment houses exceeds that of three apartments, but digestive diseases are more prevalent, and phthisis reaches its maximum incidence in them. Phthisis also explains the higher rate in two-apartment males at ages 20 to 25.

*Male v. Female Rate.*—At the several age-periods also the male rate usually exceeds the female, the exceptions, however, being of some importance. In one-apartment houses the female rate exceeds the male at ages 15 to 45, and in two-apartment houses at ages 20 to 45. Puerperal fever and septic diseases prevail among females at these ages, while phthisis contributes partly to the excess at ages 25 to 45. In three-apartment houses the excess is confined to ages 5 to 15, when the female phthisis-rate exceeds that of males. Generally, therefore, the analysis, I think, warrants the suggestion that the variations in the death-rate at all ages associated with houses differing in size are not to be explained by simple differences in age and sex constitution.

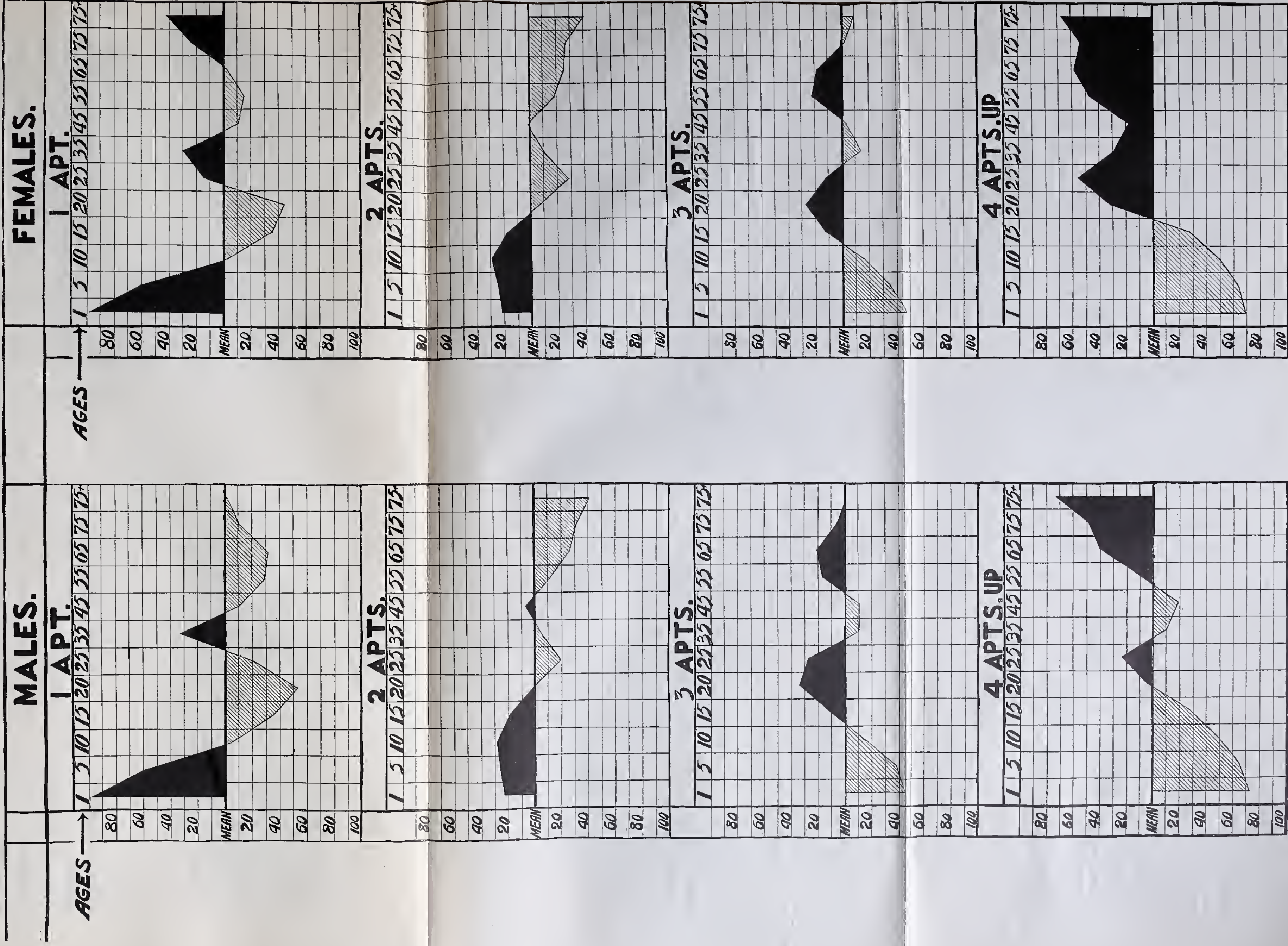
The age distribution of the male and female population in houses of one, two, three, and four apartments and upwards may be seen by referring to the chart which is here inserted and shows graphically the large proportion of children in one-apartment houses, which gradually decreases in the two, three, and four-apartment houses respectively. Quite the reverse is shown when considering the population at the older ages, which is below the mean of the City in the smaller houses, but exceeds it in the houses of three and four and more apartments.



# CENSUS 1911—GLASGOW

## COMPARATIVE AGE DISTRIBUTION OF POPULATION ACCORDING TO SIZE OF HOUSE.

### RATE PER CENT ABOVE AND BELOW THE MEAN OF THE CITY.





МОСКАЛД-ИКИ СУСИДЖ  
 МОИТАЛУНОР 70 МОИТУВИНТИО ЭДА ЗВИТАРАЧМОД  
 .ЗУНОН 70 ЭЗИС ОТ ЭМИГРОСДА

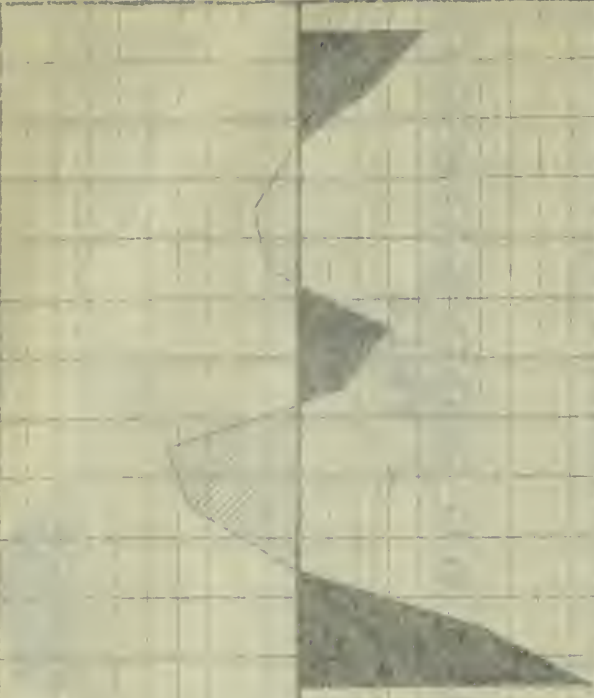
.УТИС ЭНТ 70 ИАЗМ ЭНТ ВОЛЕВ ДИА ЭВОВА ТИЭЗ РЕЧ ЭТАР

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ТРА I

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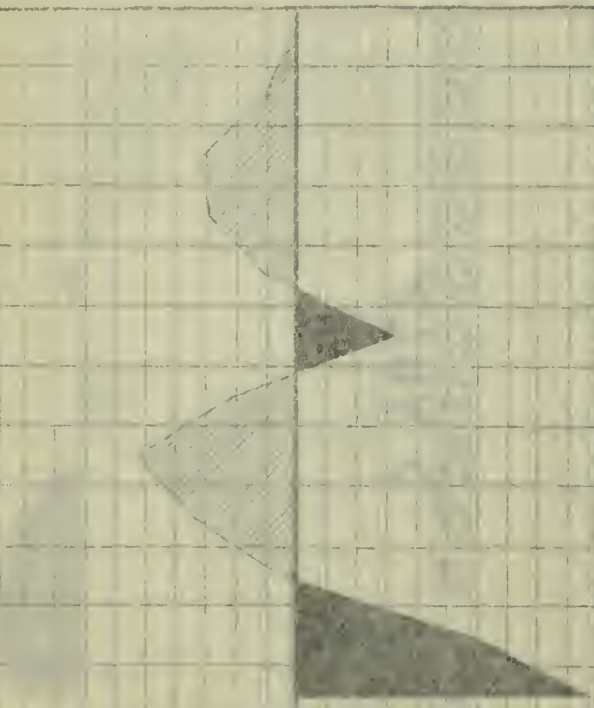


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ТРА I

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ЭТРА С

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ЭТРА С

СТ СТ СО СС СР СС СС ОС СІ ОІ С І



*Males, per 1,000 living.*

Size of house in rooms	AGES											All ages
	-1	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	+75
1 apartment, ... ..	210.25	40.56	6.97	4.54	4.82	5.24	5.11	12.55	29.18	41.17	85.11	105.90
2 apartments, ... ..	163.88	30.20	5.56	3.16	3.94	5.40	5.42	9.01	19.30	39.69	76.12	158.07
3 apartments, ... ..	128.25	17.94	3.49	2.18	3.14	3.81	4.90	7.61	14.63	29.49	64.15	146.07
4 apartments and upwards, ... ..	102.57	10.27	3.47	1.80	2.71	2.97	3.92	8.50	14.49	27.79	67.47	157.12
All houses, ... ..	169.29	29.67	5.20	2.90	3.56	4.44	5.03	9.12	18.16	34.06	71.90	147.36
Institutions and shipping, ... ..	374.07	51.95	13.13	5.74	6.40	7.67	13.10	21.50	32.97	67.25	119.87	234.45
City, ... ..	171.29	30.01	5.32	2.94	3.62	4.59	5.44	9.94	19.34	37.21	77.54	157.07

*Females, per 1,000 living.*

1 apartment, ... ..	163.64	37.47	6.92	4.46	5.61	5.89	7.37	14.86	26.84	37.28	61.09	83.85	24.90
2 apartments, ... ..	123.31	26.75	5.18	3.14	3.95	5.57	6.50	9.75	18.39	35.36	67.48	125.03	16.12
3 apartments, ... ..	101.07	14.80	4.04	2.33	2.87	3.40	4.32	6.93	10.17	24.99	54.46	147.43	11.02
4 apartments and upwards, ... ..	72.95	9.87	3.10	1.45	1.64	1.86	2.58	4.90	8.03	17.89	40.01	145.26	9.19
All houses, ... ..	129.14	26.48	5.04	2.86	3.29	4.15	5.47	8.86	14.75	28.43	56.46	127.06	15.03
Institutions and shipping, ... ..	365.45	51.65	9.55	8.37	12.43	7.72	10.05	32.33	48.51	82.61	159.73	213.98	45.47
City, ... ..	131.26	26.77	5.10	2.95	3.44	4.25	5.57	9.20	15.31	29.77	60.68	133.51	15.61

THE DEATH-RATE AS TESTED BY A STANDARD POPULATION.

But in order to get rid of the discrepancies arising from differences in age-distribution and to get all four groups of population on a fairly comparable basis, I have adopted the test of a standard population with the age and sex distribution of the whole city, and applied to the several age-groups constituting it the death-rate ascertained to exist at corresponding ages in the various sized houses. Calculated in this way, the differences become more intelligible. In 100,000 persons with the age- and sex-distribution of the whole population, the following differences emerge in association with the varying size of house :—

CALCULATED DEATHS OCCURRING AMONG 48,605 MALES IN ONE, TWO, THREE, AND FOUR APARTMENTS AND UPWARDS, AND IN INSTITUTIONS AND SHIPPING.

Ages	Size of house in rooms				Institutions and shipping
	1	2	3	4 and upwards	
— 1	247	193	151	121	440
— 5	180	134	80	46	231
— 10	36	29	18	18	68
— 15	22	15	11	9	28
— 20	23	18	15	13	30
— 25	24	24	17	13	34
— 35	43	45	41	33	109
— 45	83	60	50	56	142
— 55	134	89	67	67	151
— 65	86	109	81	76	185
— 75	106	95	80	84	150
75 +	29	43	39	42	63
Total,	1,013	854	650	578	1,631

CALCULATED NUMBER OF DEATHS OCCURRING AMONG 51,395 FEMALES IN ONE, TWO, THREE, AND FOUR APARTMENTS AND UPWARDS.

Ages	Size of house in rooms				Institutions and shipping
	1	2	3	4 and upwards	
— 1	192	145	119	86	429
— 5	166	119	66	44	229
— 10	36	27	21	16	50
— 15	22	15	11	7	41
— 20	28	19	14	8	61
— 25	30	28	17	9	39
— 35	37	33	22	13	90
— 45	99	65	46	33	215
— 55	130	89	49	39	235
— 65	111	106	75	53	247
— 75	105	116	94	69	276
75 +	45	67	79	77	114
Total,	1,001	829	613	454	2,026

We can now place the several groups on an approximately uniform basis with the following results :—

CALCULATED DEATHS.

Population.	One apartment.	Two apartments.	Three apartments.	Four apartments and upwards.	Institutions and shipping.	All ages.
Males— 48,605,	1,013	854	650	578	1,631	—
Females—51,395,	1,001	829	613	454	2,026	—
Calculated death-rate per 1,000,...	20·14	16·83	12·63	10·32	36·57	—
Observed death-rate—						
Males, ...	27·3	17·0	11·9	12·9	36·7	17·6
Females, ...	24·9	16·1	11·0	9·2	45·5	15·6
Both sexes, ...	25·9	16·5	11·5	10·8	39·3	16·6

It will be observed that the rates for the two, three, and four-apartment houses are little altered in the above arrangement. The one-apartment rate, however, is reduced by 22 per cent., and the rate for institutions by nearly 8 per cent. Even so, however, a population of 100,000 with the age and sex distribution here assumed would, with the rates obtaining in one-apartment houses, yield 2,014 deaths annually; in two-apartment houses, 1,683 deaths; in three-apartment houses, 1,263 deaths; and in houses of four apartments and upwards, only 1,032; while in institutions they would number 3,657. These are substantial differences, and indicate very fairly, I think, the varying degrees of resistance to fatal disease presented by the several groups of populations we are considering. In this relative sense I believe them to be strictly comparable; but at the same time none of them are, I believe, to be regarded as absolute rates, if for no other reason than that in a stationary population, even the one-apartment rate would imply an expectation of life at birth of 49 years, or nearly five years more than the corresponding expectation for males in England and Wales, and only something less than four years below the expectation in the selected healthy districts according to the last English Life Table (1891-1900). I am disposed, however, to think that the one apartment death-rate is understated, for you will observe that contrary to the almost uniform decrease in the number of deaths at each age as we go from one to four apartments, the *male* deaths in two-apartment houses at the ages 25-35 and 35-65, and the female deaths at ages 65-75, exceed in number these in one-apartment houses; while at ages 75+ in both sexes the one-apartment population has fewer deaths than any of the larger-sized houses. And the institutional rate, composed as it is very largely of deaths in Poor Law hospitals, suggests a population recruited largely from sick and infirm people.

In any case, the question has been answered in an analysis of the admissions to the institutions of the Parish of Glasgow during eight weeks of the present winter, kindly supplied me by Mr. Motion, Clerk to the Parish Council. During this period the admissions numbered 2,393, of whom 743 had houses of their own, 364 were from one-apartment, and 346 from two-apartment houses, while the two-apartment population is more than three times greater than the one-apartment.

*Can these differences be explained?*

Writing some years ago one would have been disposed to leave the inquiry at this point, and to have suggested that if the contrast did not completely establish the case against the smaller-sized house an appeal to the diminishing cubic space per inmate, as the number of rooms decreased, would supply what was wanting in the argument. All this is in a sense true, but the test of the uniform population has shown that the interval which separates the three from the four-apartment death-rate (18 per cent.) is relatively greater than the difference between the rates for the one and two-apartment population (17 per cent.), if we are to accept 20 per 1,000 as the true death-rate of the smallest size of house. It is to be remembered further, that in the population we are dealing with 66 per cent. of the houses are of not more than two rooms, and that 62 per cent. of the population inhabit them—that in six only of our City Divisions (or Wards) is the proportion of one-apartments below 10 per cent.; that in nine wards they form from 10 to 20 per cent., and in six wards vary from 20 to 30 per cent. of the total houses, while in five wards the proportion is above 30 per cent. The smaller-sized houses are, therefore, distributed throughout the City in varying proportions, and their room density reaches a high average.

It is an old observation in Glasgow that the number of occupants per room increases as the number of rooms decrease, and during the period we are considering the average number of inmates in *one*-apartment houses was 3·2, varying, however, from 1·8 to 3·5 in the different wards; in *two*-apartment houses the occupants average 2·4 per room; in *three*-apartment houses 1·7, and in houses of *four* apartments 1·3.



I now propose to ask to what extent the influence of these varying conditions may be traced in the causes of death among the several age-groups, according to the size of house which they occupy.

THE CAUSES OF DEATH AT AGES UNDER 5.

I select the causes of death at these ages for further inquiry because of the importance attaching to them as indices of insanitary conditions. The following general statement shows the rate per 1,000 from all causes at these ages:—

	UNDER 1.		1—5.		Death-rate under 1. = 100.
	Death-rate.	Comparative number.	Death-rate.	Comparative number.	Death-rate 1—5. = 19
1 apartment, ... ..	210·25	100	40·56	100	18
2 apartments, ... ..	163·8	78	30·20	74	14
3 apartments, ... ..	128·5	61	17·94	44	10
4 apartments and upwards,	102·57	49	10·29	25	—
Institutions and shipping,	374·07	—	51·95	—	—

The contrast in the rates at each age-period associated with the house groups here shown is sufficiently striking, but what seems to me of almost equal significance is the rapid improvement in the rate of ages 1-5 in three- and four-apartment houses. Under 1 year the four-apartment rate is still equal to one-half the rate for one-apartments, but during the next four years of life the resistance of the child in three- and four-apartment houses to fatal disease increases so rapidly, or the risks of contracting infectious disease are so diminished, that the death-rate among children in three-apartment houses is less than one-half, and in four-apartment houses only one-fourth that of one-apartment children.

If we attach a numerical value of 100 to the infant death-rate in each size of house, the one- and two-apartment child has still during the next four years to encounter a risk which can be represented by 19 and 18 respectively compared with 14 and 10 in three- and four-apartment children. A consideration of the causes of death at these ages may throw some light on the factors which produce these differences.

CAUSES OF DEATH IN INFANCY.

If we represent the one-apartment infant death-rate by 100, then the two, three, and four and larger houses may be stated at 78, 61, and 49. Can this difference be ascribed wholly to housing conditions affecting the child directly? In the endeavour to find an answer I have taken out the rates for thirty separate causes of death, and two other groups to include cases where the causes of death were unknown, or were not further analysed.

It was submitted in evidence to the Committee on Physical Deterioration<sup>1</sup> that “in no single case has it ever been asserted that ill-nourished or unhealthy babies are more frequent at time of birth among the poor than among the rich. . . . The poorest and most ill-nourished women bring forth as hale and strong-looking babies as those in the very best conditions. In fact, it almost appears as though the unborn child fights strenuously for its own health at the expense of the mother and arrives in the world with a full chance of living a normal physical existence.” If one applies to this the test which is afforded by the ability of the child to lead a separate existence apart from its mother, one finds, on the contrary, quite definite evidence, I think, that children do not enter life with an equal chance of surviving, and that the chances are least in the smallest size of house.

<sup>1</sup> Minutes of Evidence, p. 31, question 556.

Among the causes of death of males under 1 year the rate for premature birth in *one*-apartment houses is equal to 30 per 1,000; in *two*- and *three*-apartments it is 24 and 25 respectively; in *four*-apartments 20, and in institutions 41. In the case of females the corresponding rates are 24, 21, 14, and 20; but the institution rate is 68 compared with 40 for females. These differences are not due to any direct influence which the smaller houses exert on the child after birth, but to a combination of influences acting on the mother during the ante-natal period at least, probably during the whole antecedent period of her life, and impairing, I believe, her own health and the vitality of her offspring.

A priori one would have been disposed to suggest deficiency in food and rest as being included among the deteriorating influences directly affecting the mother. Experimental feeding of pregnant animals might be appealed to in favour of the suggestion of deficiency in food supply. Evidence of a more direct character is, however, available in an inquiry into the dietary of the labouring classes in Glasgow carried out during the past year by Miss Dorothy Lindsay, B.Sc., formerly Carnegie Research Fellow in the University of Glasgow, and contained in a report recently issued by the Corporation. Her observations bear so directly on the inadequacy of the dietary which prevails to an unknown extent among the population in whom the excessive death-rate from prematurity occurs, that I quote from her observations on sample dietaries in families with regular wages under 20s. per week.

Number of Study.	Protein in grammes.	Fat in grammes.	Carbohydrate in grammes.	Calories.
XVII, ...	103·0	63·5	467·9	2931·2
XXV., ...	82·6	75·0	320·7	2351·0
XXVIII., ...	96·4	67·8	423·2	2760·9
XLII., ...	98·9	88·1	377·4	2772·2
LII., ...	108·1	87·1	337·1	2635·3
Standard	120·0	100·0	500·0	3472·0

Miss Lindsay observes: "In this section, which embraces those who may properly be called poor, not one diet reaches the minimum energy value of 3,000 calories," and, she adds, "the children are nearly all small and light in weight." It is beside the point at the moment to inquire whether this insufficiency in dietary is concurrent with other causes of inefficiency in the parents; my purpose is rather to suggest that it constitutes a handicap on the life of the child at birth, and that it becomes of importance to discover whether this handicap is extinguished by the excessive death-rate from prematurity, or is reinforced by the external influences into which the child is born. Is there, in point of fact, any evidence that in the later period of childhood he is more prone to diseases which are not the mere accidents of infection than a child born under more favourable surroundings?

In Glasgow respiratory diseases are slightly more fatal to infant life than diseases of the digestive organs (29 and 28 per 1,000 births for male, and 24 and 21 for female infants), but I take the latter group first, because the diseases of which it is composed predominate from the second to the sixth month of life, and probably more accurately represent the field in which the child carries on the struggle for an independent existence. I place the rates for the diarrhœal group, and for other diseases of digestion separately, and combined.

#### MALES, AGED UNDER 1. DISEASES OF DIGESTION.

Death-rate per 1,000.						
			Diarrhœa or enteritis.	Other digestive disorders.	Both.	
1 apartment,	...	...	25·32 = 100	...	7·43 = 100	32·75
2 apartments,	...	...	19·72	...	6·09	25·81
3	"	...	10·48	...	4·44	14·92
4	"	and upwards,	12·02 = 47	...	4·81 = 64	16·83

The outstanding features of this comparison are, I think, the exaggerated prevalence of what may be regarded as the results of food infection in the smaller-sized houses, and the more uniform distribution of the rate ascribed to the other forms of diseases of the digestive organs. With regard to these latter, however, which may be regarded as due to a low standard of innervation, I suggest that part at least of the difference is consistent with a continuance of the handicap which in the earlier months of life found expression as prematurity because, while at ages 0 to 5 the excess in the smaller houses is quite marked, from 5 to 35, and again after 65, the relationship is reversed, and the higher rates tend to fall on the larger houses.

#### DISEASES OF THE NERVOUS SYSTEM.

This view gains some support, I think, from the variations which occur in the incidence of diseases of the nervous system other than non-tubercular meningitis and cerebral hæmorrhage, which latter is, however, not properly a disease of the nervous system at all.

Until the completion of the twentieth year in both sexes the higher rates tend to prevail in the smaller houses, but after this age there is an increasing tendency to find the one-apartment rates exceeded among the inhabitants of houses of other sizes, and to become associated with a change in the type of disease from the convulsive to the degenerative variety. Owing to the differences in age constitution, however, these variations are obscured in a statement of the rate at all ages.

##### MALES UNDER 1. DEATH-RATES FROM DISEASES OF NERVOUS SYSTEM.

			Meningitis (not tubercular).		Cerebral hæmorrhage.		Other diseases of nervous system.		All diseases of nervous system.
1 apartment,	...	...	3·74	...	0·55	...	9·77	...	14·06
2 apartments,	...	...	2·98	...	0·13	...	6·59	...	9·70
3     ,,	...	...	2·54	...	0·63	...	5·08	...	8·25
4     ,,     and upwards,			3·21	...	0·80	..	7·21	...	11·22

#### DISEASES OF THE ORGANS OF RESPIRATION.

In relation to house-incidence, the principal disease of this group—pneumonia—presents an almost complete contrast to the groups we have been considering. At each age-period almost without exception the higher rates fall on the houses of one and two apartments. It would therefore seem to be a disease entirely of environment and climatic conditions, resembling in its behaviour, indeed, those of a more definitely infectious type. In infancy the rate for the larger houses is equal to two-thirds that of one apartment, but a greater interval separates the rates from bronchitis, and is probably related to the increasing air impurity in houses of smaller size.

##### DISEASES OF RESPIRATORY ORGANS. MALES UNDER 1.

			Pneumonia.		Bronchitis.		Other diseases of respiratory organs.		All diseases of respiratory organs.
1 apartment,	...	...	21·46	...	13·35	...	4·95	...	39·76
2 apartments,	...	...	21·05	...	11·54	...	2·92	...	35·51
3     ,,	...	...	15·56	...	6·67	...	4·44	...	26·67
4     ,,     and upwards,			14·42	...	5·61	...	—	...	20·03

#### THE PRINCIPAL INFECTIOUS DISEASES OF CHILDHOOD.

For the purposes of this comparison I have selected the principal infectious diseases of childhood—viz., measles, whooping-cough, scarlet fever, diphtheria, membranous croup, and cerebro-spinal fever.



## MALES UNDER 1: DEATH-RATES PER 1,000.

	Measles. (1)	Whooping-cough. (2)	Scarlet fever. (3)	Diphtheria and membranous croup. (4)	Cerebro-spinal fever. (5)	Total of columns 1, 2, 4.	Com-parative number.
1 apartment, .. ...	11.70	10.46	0.28	1.10	0.28	23.26	= 100
2 apartments, ... ..	9.57	7.42	0.32	1.01	0.51	18.00	—
3 „ ... ..	3.49	5.71	0.32	0.95	—	10.15	—
4 „ and upwards,	0.80	4.01	—	0.80	—	5.61	= 24

## MALES, 1—5: DEATH-RATE PER 1,000.

	Measles. (1)	Whooping-cough. (2)	Scarlet fever. (3)	Diphtheria and membranous croup. (4)	Cerebro-spinal fever. (5)	Total of columns 1, 2, 3, 4.	Com-parative number.
1 apartment, ... ..	8.63	4.36	1.26	2.02	0.13	16.27	= 100
2 apartments, ... ..	5.90	2.79	0.97	1.56	0.18	11.22	—
3 „ ... ..	2.85	1.42	0.22	1.87	0.30	6.36	—
4 „ and upwards,	1.01	0.67	—	1.01	—	2.69	= 17

In order to cover the age-period of greatest susceptibility, I have included the ages 0-5, and in them there is a definite grading in relation to house-room with the exception of cerebro-spinal fever, the house distribution of which (in the period under review) was apparently quite erratic. The rate of “all ages” was greatest in one-apartment houses, but no fatal cases occurred in them after the age-period 10-15: it was less than in two-apartment houses at ages 0-5; whereas fatal cases do not appear in houses of four apartments and upwards until the age-period 5-10, and they continue till the age-period 35-65.

## TUBERCULOUS DISEASES.

In the circumstances of the movement considerable interest attaches to the house distribution of diseases of this class. From pulmonary tuberculosis the overhead reduction during the decade has been about 25 per cent., and this is fairly maintained in each class of house, save in four apartments and upwards. For both sexes the rates in 1901 and 1909-12 are as follows:—

## PULMONARY TUBERCULOSIS. ALL AGES. DEATH-RATE PER 1,000.

	1 apart-ment.	2 apart-ments.	3 apart-ments.	4 apartments and upwards.	All houses.	Institutions, &c.	City.
1901, { Both sexes	2.4	1.8	1.2	0.7	—	7.4	1.8
1909-12, {	1.76	1.26	0.91	0.66	—	6.9	1.34
1909-12—							
Males, ...	1.60	1.25	1.05	0.9	1.20	7.3	1.48
Females, ...	1.90	1.27	0.78	0.49	1.11	6.4	1.21

Directly, however, we distinguish between the sexes we find that the female rate at all ages is higher than the male in houses of one and two apartments, and generally that in one-apartment houses it is below the male rate only at

ages 20-25 and 45-75, and in two-apartment houses at ages 1-5, 20-25, and from 45 upwards. An excessive drift of male consumptives at these ages to parochial hospitals might tend somewhat to explain this excessive female incidence in houses, but there is no evidence of this in the institutional death-rate, which shows, indeed, a continuously excessive female rate at ages 5-55, save between 10 and 15, and again from 25-35.

In three- and four-apartment houses the rate for males of all ages exceeds that of females. In three-apartment houses, however, the female rate exceeds the rate at ages under 20, while in four apartments the female excess occurs only at the period 5-10, and again over 75. Applying the test of our standard population to these rates, the association with the house appears to be quite definite:—

CALCULATED DEATHS IN UNIFORM POPULATION.

Population.		1 apart- ment.	2 apart- ments.	3 apart- ments.	4 apart- ments.	Institutions and shipping.
Males,	48,605	86	66	48	39	245
Females,	51,395	102	70	39	22	327
<hr/>		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Death-rate, 100,000		188	136	87	61	572
Males only.						
Tuberculous meningitis,		15	15	14	10	18
Abdominal tuberculosis,		12	10	7	3	11

I have placed the corresponding figures for tubercular meningitis and abdominal tubercle along with those relating to pulmonary tuberculosis because they seem to me to supply part at least of the answer to a question which frequently puzzled me—I mean the apparent lack of parallelism between the local distribution of pulmonary and the other forms of tuberculosis. When tested by the standard of a uniform population, however, they fall into line with the distribution of phthisis.

CANCER (MALIGNANT DISEASE).

The absence of association between new growths of a malignant character and housing, in the sense we are at present dealing with it, has not escaped attention in the past. In the present inquiry the rate for each sex at all ages in houses of three apartments and upwards is higher than in one and two apartments, but lower than in institutions. At ages under 25 its distribution is irregular both in relation to age and housing, but it appears as a cause of death at every age-period thereafter and in every grade of house. At these ages the rate for males in one-apartments is lower than in larger houses, save from 35-55. In one-apartment females, the chief exception is at ages 45-55. In three-apartment females, the higher rates which properly belong to the later ages would appear to begin a decade earlier—*i.e.*, at ages 35-45. The number of deaths in institutions, however, which cannot be allocated, but which occur among persons largely recruited from the one-apartment population, would probably affect the relationship of these rates.

SUMMARY.

In endeavouring to summarize the results of this inquiry it is pertinent to ask whether the several groups of population we have been considering can be regarded as in any way permanent sections of a population. I think the death-rates which prevail among them forbid an assumption of this character. They are too low. They are not the rates of a stationary population, but to my thinking suggest an ebb and flow of families caught in successive waves of good or evil fortune. This interchange we have seen is actually taking place to a recognizable extent in the case of the one- and

two-apartment population and the Poor Law. To what extent it is also in progress between the occupants of three and four apartments and upwards there are no present means of determining. That they do occur is, I think, evident from the low range of death-rates which the larger-sized houses present.

It may be urged that selective forces are in operation determining the movement of population in the direction of a particular size of house and that these rather than the surroundings in which they are recognized are the determining factors in the death-rate. I think the inquiry suggests that this is the case in certain diseases of digestion and of the nervous system. It is otherwise with regard to infectious disease. Here the element "house" predominates, I think, for the death-rates per 1,000 from the principal infectious diseases of childhood and pneumonia at ages 1-5 are sixteen and six for one-apartment houses, twelve and six for two-apartment houses, but only seven and two for three-apartment houses, and three and one for four apartments and upwards. Before reaching these ages, however, the children born in the smaller-sized houses display evidence of a serious physical handicap, which I have endeavoured to illustrate by the difference in the rate of prematurity in the various types of houses. These difference are, I think, to some extent related to the food supply. I have suggested that the handicap is not extinguished by the high rate from prematurity, but may be traced in the disorders of digestion associated with low innervation and in the diseases of early life associated with an unstable nervous system. In later life the influences of the birth surroundings do not, I suppose, wholly disappear, but they are obscured by those which operate on adult life, and, as we have seen, diseases of the nervous system tend to become degenerative in type and appear more frequently among the occupants of houses of larger size.

In this review of the tables I cannot claim to have exhausted the suggestions which they contain. The varying incidence of fatal phthisis for example in the different classes of house suggests a wave of prevalence which has two crests, not always synchronizing as to age-periods, but with a tendency toward postponement of the earlier one as the external surroundings improve. They have associated themselves in my mind with the difference in age-incidence which might be assumed to arise in the earlier ages from an inherited bias and in the later ages from external conditions producing anew a susceptibility to the disease.

In any case the analysis may serve to emphasize the need for carrying inquiry beyond the falling death-rate at all ages to a discrimination of the age-periods at which it principally occurs. It may incidentally also serve to suggest that the whole economic condition of the poor among our population, and not their housing only, is a subject of national importance.



Table I.

1909—1912.

## MALES—1-APARTMENT HOUSES.

## DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.												All Ages.
	- 1.	- 5.	- 10.	- 15.	- 20.	- 25.	- 35.	- 45.	- 55.	- 65.	- 75.	75+.	
1. Smallpox, ...	...	2.02	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup, ...	1.10	...	...	...	...	...	...	...	...	...	...	...	...
3. Enteric Fever, ...	...	.09	...	...	...	...	...	...	...	...	...	...	...
4. Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cerebro-Spinal Fever, ...	...	1.26	...	...	...	...	...	...	...	...	...	...	...
7. Measles, ...	...	.13	...	...	...	...	...	...	...	...	...	...	...
8. Whooping Cough, ...	...	8.63	...	...	...	...	...	...	...	...	...	...	...
9. Diarrhea and Enteritis, ...	...	4.36	...	...	...	...	...	...	...	...	...	...	...
10. Other Digestive Disease, ...	...	2.70	...	...	...	...	...	...	...	...	...	...	...
11. Puerperal Fever, ...	...	.67	...	...	...	...	...	...	...	...	...	...	...
12. Erysipelas, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Other Septic Diseases, ...	...	.09	...	...	...	...	...	...	...	...	...	...	...
14. Phthisis (Pulmonary), ...	...	.22	...	...	...	...	...	...	...	...	...	...	...
15. Tuberculous Meningitis, ...	...	.67	...	...	...	...	...	...	...	...	...	...	...
16. Abdominal Tuberculosis, ...	...	1.89	...	...	...	...	...	...	...	...	...	...	...
17. Other Tuberculous Diseases, ...	...	1.30	...	...	...	...	...	...	...	...	...	...	...
18. Cancer (Malignant Disease), ...	...	.58	...	...	...	...	...	...	...	...	...	...	...
19. Rheumatic Fever, ...	...	.22	...	...	...	...	...	...	...	...	...	...	...
20. Meningitis (not Tuberculous), ...	...	...	...	...	...	...	...	...	...	...	...	...	...
21. Cerebral Hemorrhage, ...	...	1.12	...	...	...	...	...	...	...	...	...	...	...
22. Other Diseases of Nervous System, ...	...	.07	...	...	...	...	...	...	...	...	...	...	...
23. Circulatory Diseases, ...	...	1.12	...	...	...	...	...	...	...	...	...	...	...
24. Pneumonia, ...	...	.22	...	...	...	...	...	...	...	...	...	...	...
25. Bronchitis, ...	...	6.34	...	...	...	...	...	...	...	...	...	...	...
26. Other Respiratory Diseases, ...	...	2.52	...	...	...	...	...	...	...	...	...	...	...
27. Group, ...	...	.36	...	...	...	...	...	...	...	...	...	...	...
28. Influenza, ...	...	.27	...	...	...	...	...	...	...	...	...	...	...
29. Violence, ...	...	.07	...	...	...	...	...	...	...	...	...	...	...
30. Premature Births, ...	...	1.21	...	...	...	...	...	...	...	...	...	...	...
31. Unknown, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
32. All others, ...	...	.09	...	...	...	...	...	...	...	...	...	...	...
All Causes, ...	...	2.34	...	...	...	...	...	...	...	...	...	...	...
Census population (x 3), ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	210.05	40.56	6.97	4.51	4.82	5.24	5.11	12.55	29.18	41.17	85.11	105.90	27.26
	7,266	22,257	15,153	3,661	3,333	58	177	232	295	241	263	88	3,969
	...	...	...	...	...	...	...	...	...	...	...	...	...

DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.												
	-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	-65.	-75.	75+.	All Ages.
1. Smallpox,...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup,	1.01	1.56	.46	.09	...	.05	.01	...	...	...	...	...	.28
3. Enteric Fever, ...	...	.03	.04	.09	.06	.10	.25	.12	.11	.05	...	...	.10
4. Typhus Fever, ...	...	...	...	...	...	.02	...	.01	...	...	...	...	.00
5. Scarlet Fever, ...	.32	.97	.36	.06	...	.02	.02	.01	...	...	.11	...	.18
6. Cerebro-Spinal Fever, ...	.51	.18	.10	...	...	...	.01	...	...	...	...	...	.05
7. Measles, ...	9.57	5.90	.38	...	...	...	...	...	...	...	...	...	.99
8. Whooping Cough, ...	7.42	2.79	.14	...	...	...	...	...	...	...	...	...	.54
9. Diarrhea and Enteritis,	...	...	.10	.02	.06	.05	.02	.03	.22	.27	.74	1.15	.82
10. Other Digestive Diseases,	19.72	1.59	.42	.22	.31	.17	.34	.52	.72	1.59	2.55	5.15	.69
11. Puerperal Fever, ...	6.09	.60	...	...	...	...	...	...	...	...	...	...	...
12. Erysipelas, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Other Septic Diseases, ...	.32	.02	...	.22	.09	.05	.02	.04	.13	.18	.74	...	.05
14. Phthisis (Pulmonary), ...	.57	.10	...	.57	1.25	2.49	.01	.06	.09	.41	.53	...	.11
15. Tuberculous Meningitis,	.38	.54	.31	.19	...	...	1.74	1.67	2.00	1.96	1.17	...	1.25
16. Abdominal Tuberculosis,	4.82	1.64	.34	.16	.13	.05	.01	...	.02	...	...	...	.41
17. Other Tuberculous Diseases,	2.22	.96	.44	.17	.04	.02	.02	.01	...	.05	...	...	.26
18. Cancer (Malignant Disease),	1.01	.50	.18	.17	.17	.27	.06	.06	.18	.09	.21	...	.21
19. Rheumatic Fever, ...	...	.02	...	.05	.04	.02	.16	.63	2.10	4.78	6.27	7.45	.62
20. Meningitis (not Tuberculous),	...	.03	.01	.02	.02	.02	...	.04	.02	...	...	...	.02
21. Cerebral Hemorrhage, ...	2.98	1.02	.21	.05	.08	.02	.02	.04	.04	.05	...	...	.26
22. Other Diseases of Nervous System,	.13	.05	...	.02	.02	.02	.06	.14	.90	3.82	8.40	20.62	.48
23. Circulatory Diseases, ...	6.59	1.15	.16	.09	.15	.07	.17	.18	.65	.86	3.30	5.15	.58
24. Pneumonia, ...	2.09	.18	.19	.25	.46	.61	.46	1.34	3.12	7.15	16.59	28.06	1.40
25. Bronchitis, ...	21.05	5.75	.49	.21	.27	.37	.50	1.20	2.83	4.00	6.16	7.45	2.16
26. Other Respiratory Diseases,	11.54	1.19	.08	.02	.06	.15	.18	.36	1.64	5.42	11.27	23.48	1.19
27. Croup, ...	2.92	.26	.03	.03	.02	.10	.07	.27	.36	.68	.74	1.72	.25
28. Influenza, ...	1.71	.21	.01	...	...	...	...	...	...	...	...	...	.07
29. Violence, ...	.25	.06	.01	...	...	...	.03	.03	.22	.27	.42	...	.06
30. Premature Births, ...	1.84	.93	.36	.17	.27	.32	.53	1.19	1.37	1.82	1.91	4.01	.75
31. Unknown, ...	24.34	...	...	...	...	...	...	...	.16	.09	.21	...	.70
32. All others, ...	1.08	.02	.01	...	...	...	.01	.06	.240	6.15	14.78	53.83	.06
...	33.40	1.95	.73	.46	.44	.41	.72	1.00	2.40	6.15	14.78	53.83	2.53
All Causes, ...	163.88	30.20	5.56	3.16	3.94	5.40	5.42	9.01	19.30	39.69	76.12	158.07	17.07
Deaths, ...	2,585	1,859	407	200	205	222	474	700	860	872	716	276	9,376
Census population (x 3), ...	15,774	61,542	73,140	63,228	52,077	41,001	87,369	77,622	44,526	21,969	9,405	1,746	549,399

Table III.

MALES—3-APARTMENT HOUSES.

DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.												All Ages.
	-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	-65.	-75.	75+.	
1. Smallpox,...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Enteric Fever, ...	.95	1.87	.70	.12	.03	...	...	...	...	...	...	...	.20
4. Typhus Fever, ...	...	...	.05	...	.07	...	.20	.07	.08	.06	...	...	.06
5. Scarlet Fever, ...	...	...	...	...	...	...	...	...	.04	...	...	...	.00
6. Cerebro-Spinal Fever, ...	.32	.22	.19	.12	.03	.04	...	.03	...	...	...	...	.06
7. Measles, ...	...	.30	...	...	.03	...	...	...	...	...	...	...	.03
8. Whooping Cough, ...	3.49	2.85	.19	...	...	...	...	...	...	...	...	...	.23
9. Diarrhoea and Enteritis, ...	5.71	1.42	.05	...	...	...	...	...	...	...	...	...	.16
10. Other Digestive Diseases, ...	10.48	1.12	.05	...	.03	...	.03	.07	.04	.31	.94	4.66	.30
11. Puerperal Fever, ...	4.44	.45	.24	.26	.23	.29	.34	.24	.66	1.38	.94	1.55	.48
12. Erysipelas, ...	1.27	...	...	...	...	.04	...	...	...	.13	...	...	...
13. Other Septic Diseases, ...	...	...	...	.04	.10	...	...	...	...	.06	.16	...	.06
14. Phthisis (Pulmonary), ...	.32	.30	.05	.19	.86	1.33	1.68	1.02	2.07	1.57	.79	...	.03
15. Tuberculous Meningitis, ...	2.54	1.79	.14	.12	.27	.07	...	.03	.04	.06	.16	...	1.05
16. Abdominal Tuberculosis, ...	.63	.82	.24	.12	...	.07	.05	.03	...	.06	...	...	.22
17. Other Tuberculous Diseases, ...	.32	.30	.19	.16	.17	.07	.08	.21	.12	.19	...	...	.12
18. Cancer (Malignant Disease), ...	...	...	.09	...	.03	.04	.25	.49	1.21	4.01	8.64	6.22	.79
19. Rheumatic Fever, ...	...	...	...	...	.03	.04	...	...	.04	.06	.16	...	.02
20. Meningitis (not Tuberculous), ...	2.54	.60	.05	.08	.03	...	.06	.07	...	...	...	...	.10
21. Cerebral Haemorrhage, ...	.63	...	...	.04	...	.07	.11	.10	.98	3.51	8.65	17.87	.73
22. Other Diseases of Nervous System, ...	5.08	.67	.19	.04	.10	.04	.14	.24	.58	.81	3.46	9.32	.46
23. Circulatory Diseases, ...	3.49	.30	.09	.23	.27	.25	.28	1.16	2.38	5.20	15.24	18.65	1.47
24. Pneumonia, ...	15.56	2.25	.24	.12	.27	.47	.56	1.05	1.95	2.75	2.83	3.11	1.17
25. Bronchitis, ...	6.67	.97	...	...	...	.04	.11	.14	1.01	2.88	7.55	12.43	.76
26. Other Respiratory Diseases, ...	4.44	.15	...	.04	...	.07	.03	.24	.43	.56	1.26	.78	.24
27. Croup, ...	...	.07	.05	...	...	...	...	...	.04	...	...	...	.01
28. Influenza, ...	.32	.07	...	...	.03	...	...	...	.08	.44	.79	1.55	.08
29. Violence, ...	1.27	.30	.28	.08	.13	.22	.42	.88	.86	.69	.63	1.55	.45
30. Premature Births, ...	25.40	...	...	...	...	...	...	...	...	...	...	...	.34
31. Unknown, ...	...	.07	...	...	...	...	...	...	...	.06	...	...	.02
32. All others, ...	32.38	1.05	.41	.42	.43	.62	.56	1.40	1.83	4.70	11.63	67.60	2.17
Deaths, ...	192.25	17.94	3.49	2.18	3.14	3.81	4.90	7.61	14.63	29.49	64.15	146.07	11.96



DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

[illegible]

Table V.

1909—1912.

# MALES—INSTITUTIONS AND HARBOUR.

## DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS

CAUSE OF DEATH.	AGE.											
	-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	65.	-75.	75+.
1. Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup, ...	...	...	...	...	...	...	...	...	...	...	...	...
3. Enteric Fever, ...	...	67	...	...	...	...	...	...	...	...	...	...
4. Typhus Fever, ...	...	...	...	...	...	20	20	19	...	16	...	...
5. Scarlet Fever, ...	...	135	...	...	...	...	...	...	...	...	...	...
6. Cerebro-Spinal Fever, ...	...	...	...	...	43	...	...	...	...	...	...	...
7. Measles, ...	1111	1416	109	...	43	...	...	...	...	...	...	...
8. Whooping Cough, ...	...	67	...	...	...	...	...	...	...	...	...	...
9. Diarrhea and Enteritis, ...	10741	1351	...	...	...	...	10	...	23	...	...	...
10. Other Digestive Diseases, ...	1111	202	...	...	43	20	50	48	35	81	116	141
11. Puerperal Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...
12. Erysipelas, ...	...	...	...	...	...	...	...	...	...	...	...	...
13. Other Septic Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...
14. Phthisis (Pulmonary), ...	370	67	...	127	255	425	20	19	23	16	29	12
15. Tuberculous Meningitis, ...	1482	...	...	...	...	...	666	858	896	1189	1011	141
16. Abdominal Tuberculosis, ...	...	67	164	...	...	...	...	...	...	...	...	...
17. Other Tuberculous Diseases, ...	3333	405	712	64	128	20	30	67	59	49	87	...
18. Cancer (Malignant Disease), ...	...	...	...	64	...	...	...	29	212	472	664	105
19. Rheumatic Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...
20. Meningitis (not Tuberculous), ...	...	...	...	64	...	...	...	10	...	...	...	...
21. Cerebral Hæmorrhage, ...	...	...	...	...	...	...	...	19	247	635	1271	...
22. Other Diseases of Nervous System, ...	...	67	109	...	...	20	...	...	...	...	...	...
23. Circulatory Diseases, ...	370	67	...	64	43	101	40	87	153	130	260	...
24. Pneumonia, ...	2593	270	...	64	...	61	101	212	212	1369	3264	...
25. Bronchitis, ...	2963	675	...	...	...	20	...	77	401	700	1069	...
26. Other Respiratory Diseases, ...	...	...	...	...	...	...	...	38	224	651	1762	...
27. Croup, ...	...	...	...	...	...	...	...	...	...	...	...	...
28. Influenza, ...	...	...	...	...	...	...	...	...	...	...	...	...
29. Violence, ...	...	...	...	...	85	40	61	175	188	228	231	...
30. Premature Births, ...	4074	...	...	...	...	...	20	...	...	...	...	...
31. Unknown, ...	...	...	...	...	...	...	...	...	...	...	...	...
32. All others, ...	9259	337	219	127	...	40	141	183	543	1010	1934	...
All Causes, ...	37407	5195	1313	574	640	767	1310	2150	3297	6725	11987	23445
Deaths, ...	101	77	24	9	15	38	130	223	280	413	415	166
Census population (× 3), ...	270	1,482	1,827	1,569	2,343	4,950	9,918	10,374	8,490	6,141	3,462	708
CITY,	17129	3001	532	294	362	459	544	994	1934	3721	7754	15707
Census population (× 3)	51788	9003	1596	882	1086	1497	16312	15542	5783	11163	22968	20849

DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.												
	- 1.	- 5.	- 10.	- 15.	- 20.	- 25.	- 35.	- 45.	- 55.	- 65.	- 75.	75 +.	All Ages.
1. Smallpox,...	1.23	1.83	.51	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup, ...	...	...	.06	...	...	...	.03	...	...	...	...	...	.35
3. Enteric Fever, ...	...	...	...	.10	...	...	.18	...	...	...	...	...	.07
4. Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Scarlet Fever, ...	.41	1.03	.51	...	...	...	...	...	...	...	...	...	.20
6. Cerebro-Spinal Fever, ...	.69	.09	.06	...	...	...	.03	...	...	...	...	...	.05
7. Measles, ...	7.85	7.85	.57	...	...	...	...	...	...	...	...	...	1.43
8. Whooping Cough, ...	10.84	4.10	.13	.10	...	...	...	...	...	...	...	...	1.03
9. Diarrhea and Enteritis, ...	19.62	2.63	.13	.20	...	...	.05	...	.15	.44	.89	2.53	1.35
0. Other Digestive Diseases, ...	5.08	.62	.13	.42	.23	.22	.18	.64	.86	1.65	1.94	2.11	.75
1. Puerperal Fever, ...	...	...	...	...	.35	.60	.55	.54	.08	...	...	...	.27
2. Erysipelas, ...	.41	.04	...	...	.12	.16	...	.16	.15	.33	.15	...	.10
3. Other Septic Diseases, ...	.27	.13	...	.20	.12	.44	...	.38	.23	.22	...	...	.23
4. Phthisis (Pulmonary), ...	.96	.67	.57	1.33	2.10	1.96	2.32	4.04	2.97	1.43	.74	1.26	1.90
5. Tuberculous Meningitis, ...	2.47	1.38	.51	...	.12	...	.03	.05	...	...	...	...	.36
6. Abdominal Tuberculosis. ...	1.37	1.07	.57	.20	.23	.11	.05	.20	...	...	...	...	.33
7. Other Tuberculous Diseases, ...	.82	.75	.57	.30	.23	.22	.05	.11	.08	...	...	.42	.28
8. Cancer (Malignant Disease), ...	...	...	...	.10	...	.06	.26	.86	3.50	4.40	6.26	2.53	.96
9. Rheumatic Fever, ...	...	...	.06	...	...	...	...	.05	.11	.11	...	...	.02
20. Meningitis (not Tuberculous), ...	3.15	.89	.25	...	.12	...	...	.11	.08	...	.15	...	.31
21. Cerebral Hemorrhage, ...	.27	.04	...	...	...	...	.13	.54	1.71	2.97	6.26	7.16	.75
22. Other Diseases of Nervous System, ...	8.92	.94	.06	.20	.12	.05	.16	.32	.39	1.54	1.34	1.26	.80
23. Circulatory Diseases, ...	1.10	.13	.13	...	.46	.49	.68	1.83	4.82	6.38	13.26	13.48	1.94
24. Pneumonia, ...	17.83	7.14	.70	.30	...	.33	.47	.48	2.64	2.31	3.13	4.64	2.52
25. Bronchitis, ...	12.07	2.05	.19	...	.12	.05	.26	.86	4.05	8.24	12.37	18.54	2.49
26. Other Respiratory Diseases, ...	2.47	.35	.13	...	.12	.05	.05	.52	.62	1.10	.89	1.26	.39
27. Croup, ...	.14	.22	...	...	...	...	...	...	...	...	...	...	.03
28. Influenza, ...	...	...	...	...	...	.05	...	...	.08	...	...	...	.01
29. Violence, ...	3.57	1.25	.70	.30	.35	...	.13	.75	.93	1.10	1.19	2.53	.75
30. Premature Births, ...	24.28	...	...	...	...	...	...	...	...	...	...	...	1.05
31. Unknown, ...	1.37	.04	...	...	.12	...	.08	.11	.31	.22	.30	...	.15
32. All others, ...	36.62	2.23	.38	.71	.70	.98	1.40	2.42	3.11	4.84	12.22	25.71	4.03
All Causes, ...	163.64	37.47	6.92	4.46	5.61	5.89	7.37	14.86	26.84	37.28	61.09	83.85	24.90
Deaths, ...	1,193	841	109	44	48	108	280	276	345	339	410	199	4,192
Census population ( × 3), ...	7,290	22,437	15,720	9,870	8,556	18,324	36,510	18,573	12,855	9,093	6,711	2,373	168,312



Table VII.

1909—1912.

## FEMALES—2-APARTMENT HOUSES.

DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.												All Ages.
	-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	-65.	-75.	75+.	
1. Smallpox,...	...	1.82	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup,	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Enteric Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cerebro-Spinal Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Measles, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Whooping Cough, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Diarrhea and Enteritis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Other Digestive Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Puerperal Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Erysipelas, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Other Septic Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
14. Phthisis (Pulmonary), ...	...	...	...	...	...	...	...	...	...	...	...	...	...
15. Tuberculous Meningitis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
16. Abdominal Tuberculosis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Other Tuberculous Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
18. Cancer (Malignant Disease), ...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Rheumatic Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
20. Meningitis (not Tuberculous), ...	...	...	...	...	...	...	...	...	...	...	...	...	...
21. Cerebral Hemorrhage, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
22. Other Diseases of Nervous System, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
23. Circulatory Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
24. Pneumonia, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
25. Bronchitis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
26. Other Respiratory Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
27. Group, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
28. Influenza, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
29. Violence, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
30. Premature Births, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
31. Unknown, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
32. All others, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Causes, ...	123.31	26.75	5.18	3.14	3.95	5.57	6.50	9.75	18.39	35.36	67.48	125.03	16.12
Census population (x 3), ...	15,741	60,837	74,001	63,375	50,577	40,161	88,963	71,569	42,727	31,222	20,025	12,427	8,011

DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.												All Ages.
	-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	-65.	-75.	75+.	
1. Smallpox,...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup,	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Enteric Fever, ...	33	130	58	19	...	...	03	...	04	...	...	...	15
4. Typhus Fever, ...	...	07	...	...	07	...	05	...	07	...	...	...	04
5. Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cerebro-Spinal Fever, ...	33	72	24	11	...	04	...	...	...	...	12	...	08
7. Measles, ...	33	...	05	...	03	...	...	...	...	...	...	...	01
8. Whooping Cough, ...	535	202	10	...	...	...	03	...	...	...	...	...	19
9. Diarrhea and Enteritis, ...	435	137	10	...	...	...	...	...	...	...	...	...	14
10. Other Digestive Diseases, ...	1037	94	24	04	03	...	05	19	17	30	98	30	33
11. Puerperal Fever, ...	502	07	24	26	20	18	27	45	53	118	159	303	48
12. Erysipelas, ...	...	...	...	...	07	18	08	16	...	...	...	...	06
13. Other Septic Diseases, ...	33	...	...	...	03	...	...	...	04	...	...	...	01
14. Phthisis (Pulmonary), ...	...	...	14	...	10	...	13	03	04	12	61	86	09
15. Tuberculous Meningitis, ...	335	101	29	34	106	128	128	80	77	59	12	...	78
16. Abdominal Tuberculosis, ...	67	72	24	04	13	...	03	16	04	...	...	...	11
17. Other Tuberculous Diseases, ...	...	07	19	15	13	11	08	06	07	12	24	...	13
18. Cancer (Malignant Disease), ...	...	...	...	...	...	...	27	107	221	591	867	951	10
19. Rheumatic Fever, ...	...	...	...	04	03	...	...	...	...	...	...	...	122
20. Meningitis (not Tuberculous), ...	335	72	19	...	07	...	...	06	04	...	...	...	01
21. Cerebral Hemorrhage, ...	67	...	...	...	03	...	05	26	56	242	647	1211	12
22. Other Diseases of Nervous System, ...	435	72	...	07	07	26	22	19	21	89	330	692	61
23. Circulatory Diseases, ...	67	07	24	41	23	44	49	96	169	342	879	2205	46
24. Pneumonia, ...	1507	224	38	19	10	07	30	48	46	177	354	735	128
25. Bronchitis, ...	704	51	05	...	13	07	03	06	70	230	794	1859	85
26. Other Respiratory Diseases, ...	167	22	05	11	03	04	08	10	14	47	37	346	83
27. Group, ...	...	...	...	...	...	...	...	...	...	...	...	43	18
28. Influenza, ...	33	07	...	...	...	...	03	03	07	30	37	216	02
29. Violence, ...	100	29	38	08	13	11	...	19	25	24	12	173	08
30. Premature Births, ...	1439	...	...	...	...	...	...	...	...	...	...	...	19
31. Unknown, ...	...	116	05	...	...	...	03	...	...	06	12	...	17
32. All others, ...	2177	...	19	26	20	55	79	168	207	490	1111	5793	02
All Causes, ...	10107	1480	404	233	287	340	432	693	1017	2499	5446	14743	1102
Deaths, ...	302	205	84	62	87	93	159	216	289	423	446	341	2707
Census population (x 3), ...	2,988	13,845	20,844	26,583	30,219	27,297	36,837	31,122	28,428	16,935	8,190	2,313	245,601

Table IX,

1909—1912.

## FEMALES—4-APARTMENT HOUSES AND UP.

## DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

	CAUSE OF DEATH.	AGE.											All Ages.
		-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	-65.	-75.	75+.
1.	Smallpox, ...	...	1.13	...	...	...	...	...	...	...	...	...	...
2.	Diphtheria and Membranous Croup, ...	...	...	.60	.29	...	...	...	...	...	...	...	.08
3.	Enteric Fever, ...	...	...	.10	...	.04	.03	.05	.07	...	.06	...	.04
4.	Typhus Fever, ...	...	.32	...	.15	...	.03	...	.03	...	...	...	...
5.	Scarlet Fever, ...	...	...	.10	...	...	...	...	.03	...	...	...	.03
6.	Cerebro-Spinal Fever, ...	...	...	...	...	...	...	...	.03	...	...	...	.00
7.	Measles, ...	.73	1.62	.40	...	...	...	...	...	...	...	...	.07
8.	Whooping Cough, ...	2.19	.49	...	...	...	...	...	...	...	...	...	.03
9.	Diarrhœa and Enteritis, ...	7.29	.49	...	.07	...	.03	...	.03	...	.06	.59	.13
10.	Other Digestive Diseases, ...	3.65	.16	.40	.07	.12	.23	.16	.40	.29	.77	1.67	.44
11.	Puerperal Fever, ...	...	...	...	...	.04	.03	.02	.10	...	...	...	.03
12.	Erysipelas, ...	...	...	...	...	...	...	...	.03	.04	.22	...	.03
13.	Other Septic Diseases, ...	...	...	.20	...	...	.03	...	.03	...	.06	...	.03
14.	Phthisis (Pulmonary), ...	...	...	.30	.07	.48	.49	.66	.80	.51	.39	...	.49
15.	Tuberculous Meningitis, ...	3.65	1.13	...	.07	.04	...	.02	.07	.04	...	...	.08
16.	Abdominal Tuberculosis, ...	1.46	...	...	.07	.08	...	.05	.10	...	...	.10	.05
17.	Other Tuberculous Diseases, ...	...	.32	...	...	.08	.10	.05	.07	.11	.06	...	.07
18.	Cancer (Malignant Disease), ...	...	...	...	...	...	.03	.18	.66	1.76	3.58	6.49	1.11
19.	Rheumatic Fever, ...	...	...	...	...	...	...	...	.07	...	...	...	.01
20.	Meningitis (not Tuberculous), ...	2.19	.65	.10	.07	...	...	.02	...	...	...	...	.05
21.	Cerebral Hæmorrhage, ...	...	...	...	...	...	...	...	.13	.55	1.99	4.33	.61
22.	Other Diseases of Nervous System, ...	3.65	.16	...	.15	...	.10	.05	.13	.40	1.27	2.85	.46
23.	Circulatory Diseases, ...	1.46	...	.20	.22	.28	.37	.52	.70	.99	3.36	8.55	1.45
24.	Pneumonia, ...	4.38	.97	.20	.07	...	.03	.13	.16	.70	1.38	1.87	.50
25.	Bronchitis, ...	4.38	.49	...	...	...	...	...	.03	.37	.77	3.14	.53
26.	Other Respiratory Diseases, ...	1.46	...	...	...	...	...	.07	.07	.29	.28	.88	.19
27.	Croup, ...	.73	...	...	...	...	...	...	...	...	...	...	.00
28.	Influenza, ...	...	.16	...	...	...	...	...	.07	.18	.06	.69	.08
29.	Violence, ...	...	...	.10	.07	.08	.03	.13	.03	.04	.22	.59	.15
30.	Premature Births, ...	20.41	...	...	...	...	...	...	...	...	...	...	.13
31.	Unknown, ...	.73	.16	...	...	.04	...	...	...	.04	...	...	.02
32.	All others, ...	14.59	1.62	.40	.15	.36	.33	.47	1.09	1.72	3.36	...	2.30
All Causes, ...		72.95	9.87	3.10	1.45	1.64	1.86	2.58	4.90	8.03	17.89	40.01	9.19
Census population (x 3)		1,571	6,184	10,231	13,826	17,420	21,015	24,610	28,205	31,799	35,394	40,015	2,021



## DEATH-RATES PER 1,000 FROM SEVERAL CAUSES AT VARIOUS AGE PERIODS.

CAUSE OF DEATH.	AGE.											All Ages.	
	-1.	-5.	-10.	-15.	-20.	-25.	-35.	-45.	-55.	-65.	-75.		75+.
1. Smallpox,...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Diphtheria and Membranous Croup,	...	...	...	...	...	...	...	...	...	...	...	...	...
3. Enteric Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
4. Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Scarlet Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Cerebro-Spinal Fever,	...	...	...	...	...	...	...	...	...	...	...	...	...
7. Measles, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
8. Whooping Cough,	...	...	...	...	...	...	...	...	...	...	...	...	...
9. Diarrhea and Enteritis,	...	...	...	...	...	...	...	...	...	...	...	...	...
10. Other Digestive Diseases,	...	...	...	...	...	...	...	...	...	...	...	...	...
11. Puerperal Fever,	...	...	...	...	...	...	...	...	...	...	...	...	...
12. Erysipelas, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Other Septic Diseases,	...	...	...	...	...	...	...	...	...	...	...	...	...
14. Phthisis (Pulmonary), ...	...	...	...	...	...	...	...	...	...	...	...	...	...
15. Tuberculous Meningitis,	...	...	...	...	...	...	...	...	...	...	...	...	...
16. Abdominal Tuberculosis,	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Other Tuberculous Diseases,	...	...	...	...	...	...	...	...	...	...	...	...	...
18. Cancer (Malignant Disease),	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Rheumatic Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
20. Meningitis (not Tuberculous),	...	...	...	...	...	...	...	...	...	...	...	...	...
21. Cerebral Hemorrhage, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
22. Other Diseases of Nervous System,	...	...	...	...	...	...	...	...	...	...	...	...	...
23. Circulatory Diseases, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
24. Pneumonia, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
25. Bronchitis, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
26. Other Respiratory Diseases,	...	...	...	...	...	...	...	...	...	...	...	...	...
27. Group, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
28. Influenza, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
29. Violence, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
30. Premature Births, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
31. Unknown, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
32. All others, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
All Causes, ...	365,45	51,65	9,55	8,37	12,43	7,72	10,05	32,33	48,51	82,61	159,73	213,98	45,47
Deaths, ...	91	62	16	15	23	26	45	74	92	143	265	199	1,051
Census population (× 3), ...	249	1,200	1,674	1,791	1,848	3,366	4,479	2,289	1,896	1,731	1,659	930	23,112
CITY,	131,26	26,77	5,10	2,95	3,44	4,25	5,57	9,20	15,31	29,77	60,68	133,51	15,61
Deaths, ...	3,628	2,797	624	340	399	508	1,172	1,442	1,743	2,091	2,463	1,675	18,882
Census population (× 3), ...	27,639	104,502	122,283	115,302	115,980	119,592	210,333	156,720	113,841	70,248	40,590	12,546	1,209,576

Table XI.

**GLASGOW—Total Deaths—October, 1909–September, 1912.**

HOUSES.	MALES.	FEMALES.	TOTAL.
1 Apartment, ... ..	3,969	4,192	8,161
2 Apartments, ... ..	9,376	8,911	18,287
3 Apartments, ... ..	2,808	2,707	5,515
4 Apartments and upwards, ... ..	2,098	2,021	4,119
Institutions and Harbour, ... ..	1,891	1,051	2,942
TOTAL, ... ..	20,142	18,882	39,024

## APPENDIX III.

## OPHTHALMIA NEONATORUM.

MEMORANDUM BY MEDICAL OFFICER OF HEALTH, SUBMITTING  
REPORT BY DR. FLORENCE MANN.

On relinquishing her duties Dr. Mann prepared a Report on the recent experience of the Department in dealing with Ophthalmia Neonatorum, and the object of this Memorandum is to give prominence to some of the more important of her conclusions.

The Report covers a period of 17 months, during which 341 cases of the disease occurring within the boundary were notified. The original estimate placed the probable number annually at about 200, and the actual experience has shown this number to be 208.

## PREVALENCE OF THE DISEASE.

In relation to the number of live births the proportion of cases notified is equal to 9·4 per 1,000. There are no other figures readily available showing the incidence of the disease in a mixed community with which this rate may be compared, but it may be contrasted with rates prevailing in Maternity Hospitals and in the Lying-in Departments of Poor Law Institutions in this country, in which special preventive methods are followed with differing degrees of stringency:—

	Births.	Ophthalmia Neonatorum.	Per cent. Ophthalmia.
British Maternity Hospitals, ... ..	35,815	79	·22*
Provincial Poor Law Lying-in Departments			
in England, ... ..	17,579	128	·72*
Glasgow, ... ..	31,395	295	·94

\* Quoted from Dr. Sydney Stephenson's work on "Ophthalmia Neonatorum."

The standard reached in the Maternity Hospitals may well form the objective of the work now being undertaken by the Health Department.

## PRESENCE OF GONOCOCCUS.

In 31 per cent. only of the cases was this organism recovered, but it is probable that as the methods of swabbing become more consolidated a higher proportion will be obtained. It is usually regarded as being present in about one-half the eyes affected.

## ASSOCIATION WITH SYPHILIS.

In fully 9 per cent. of the cases both diseases were found in association, and in an interesting table, contrasting the results of the eye-affection in children with and without Syphilis, Dr. Mann shows that of the Non-syphilitic



children 81 per cent. made an absolute recovery from the eye-affection contrasted with 48 per cent. of the Syphilitic; that defective vision resulted in 6 per cent. of the Non-syphilitic, but in 32 per cent. of the Syphilitic; while total blindness followed in 1·2 per cent. of the former, but in 8 per cent. of the latter.

The disastrous results which follow when Syphilis is present could scarcely find a better illustration, and lend support to the suggestion recently submitted to the effect that the Health Committee should afford facilities whereby every medical practitioner may obtain the blood-reaction known as Wassermann's in any case in which he may deem it desirable.

#### RESULT IN RELATION TO PERIOD WHEN EFFECTIVE TREATMENT BEGAN.

The beneficial results of early treatment carried out systematically with trained help is well illustrated in the results of treatment in the earlier as compared with the later admissions.

RESULTS.	AGE ON ADMISSION.					
	4 to 8 Days.		8 to 21 Days.		21 Days and over.	
	Cases.	Average Residence in Days.	Cases.	Average Residence in Days.	Cases.	Residence.
One eye cured, ... ..	...	...	...	...	...	...
Both eyes cured, ... ..	5	38	16	30	9	24
Corneal Defects—						
Right eye—Sight good, ... ..	...	...	...	...	...	...
,, fair, ... ..	...	...	...	...	...	...
Blind, ... ..	...	...	4	63	...	...
Left eye—Sight good, ... ..	...	...	...	...	...	...
,, fair, ... ..	...	...	2	52	1	21
Blind, ... ..	...	...	2	52	1	14
Both eyes blind, ... ..	...	...	2	60	1	29
Total, ... ..	5	...	26	...	12	...

Five cases admitted within eight days of birth made complete recovery, as did 16 out of 26 admitted during the next two weeks. Of the 10 remaining, who were admitted during this period, 4 became blind in the right eye, 2 in the left eye, and 2 in both eyes, while 2 others had defective vision in the left eye.

I cordially endorse the suggestions with which Dr. Mann closes her Report.

A. K. CHALMERS.

Sanitary Chambers,  
Glasgow, 31st March, 1913.

## DR. MANN'S REPORT.

## OPHTHALMIA NEONATORUM.

*A Record of the Work from 1st August, 1911, to 31st December, 1912.*

Total number of births, ... ..	32,664
„ „ still births, ... ..	1,269
„ „ live births, ... ..	<u>31,395</u>

Total number of Notifications 454, and the cases were notified by the following:—

Beyond Boundary.	Doctors.	Institutions.	Midwives.	Staff.	
46	119	172	35	82	= 454

These figures include duplicate notices,\* of which there were 113, leaving a total of 341 cases of Ophthalmia. If the still births and those cases occurring beyond the boundary are excluded this gives an Ophthalmia Neonatorum rate of 9·4 per 1,000 births. Definite information has been obtained regarding 259 of these, the others being accounted for in the following Table:—

Beyond Boundary, ... ..	46
Treated in Hospital, ... ..	8
Doctor in attendance, ... ..	3
Not Ophthalmia, ... ..	1
Information refused, ... ..	1
Still under treatment, ... ..	23
	<u>82</u>

TABLE SHOWING THE ONSET OF DISEASE IN RELATION TO THE ATTENDANCE AT BIRTH, WITH SPECIAL REFERENCE TO THE PRESENCE OF VAGINAL DISCHARGE IN THE MOTHER.

*(The figures in brackets indicate leucorrhœa.)*

## ONSET OF DISEASE.

Nature of Attendance.	— 12 Hours.	1 to 4 Days.	4 to 8 Days.	+ 8 Days.	Total.
Doctors, ... ..	2	(13) 35	(5) 14	(1) 3	54
Institutions, ... ..	...	(1) 1	(1) 4	(2) 3	8
Institutional Nurses, ...	2	(15) 32	(7) 19	(2) 2	55
Certificated Midwives,	(1) 2	(19) 42	(10) 26	(2) 8	78
Others—Handywomen, Neighbours, &c.,	(1) 3	(13) 35	(10) 20	(2) 6	64
	(2) 9	(61) 145	(33) 83	(9) 22	(105) 259
	3·5 per cent.	56 per cent.	32 per cent.	8·5 per cent.	

\* Doctor and midwife or institution.

## ONSET OF THE DISEASE.

In 9 cases, or 3·5 per cent., symptoms were present within 12 hours of birth, and this would suggest that the actual infection of the baby's eyes may occur within the maternal passages before or during the act of birth. In 145 cases, or 56 per cent., symptoms appeared within the first four days, and it is presumed that in these cases the infection was due to inoculation soon after birth, probably during the first bath. This may be due to carelessness in protecting the infant from the maternal secretions—dirty sponges, dirty baths, dirty cloths, direct infection from the mother's fingers, the attendant's fingers, or even the baby's own hands. In those cases when the symptoms did not appear until after the fourth day (32 per cent.), or after the eighth day (8·5 per cent.), the disease depended as a rule upon the same cause, *i.e.*, carelessness plus infective maternal secretions.

Only 105 mothers admitted the presence of vaginal discharges; and one must remember that the presence of leucorrhœa is not a definite symptom of gonorrhœa. None of the mothers gave a history of gonorrhœa, so that probably where this disease is present it is almost chronic or latent, and is called into activity by the changes due to parturition. The fact that in seven families a previous child had suffered from Ophthalmia Neonatorum gives some support to this view.

TABLE SHOWING RESULT OF TREATMENT.

RESULT.	No Swab.	Gonococcal.	Non-Gonococcal.	Total.
Both eyes cured, ... ..	57	61	92	210
Corneal Defects—				
One eye injured but sight good, <sup>1</sup>	1	5	1	7
" " " " fair, <sup>2</sup>	...	2	...	2
One eye blind, ... ..	...	5	1	6
Both eyes injured but sight good,	...	...	...	...
" " " " fair,	...	1	1	2
Both eyes blind, ... ..	1	...	2	3
Removed, ... ..	3	...	5	8
Dead, ... ..	4	8	9	21
	66	82	111	259

<sup>1</sup> When the scar was faint, small in size, and clearing up, the sight is said to be "good."

<sup>2</sup> When the scar was larger, central in situation, but clearing up, the sight is regarded as "fair."

In 66 cases, or 25 per cent., the discharge from the eyes was not examined bacteriologically, the reason for this being that at first doctors' notifications and cases under institutional care were not swabbed. Within a short time of the notification of Ophthalmia Neonatorum coming into force it was found advisable to examine all cases, and now swabs are taken unless the family doctor is actually treating the disease, in which case he is requested to take a swab. 57 of these no-swab cases were cured without defect; one had a small scar in one eye, one blind in one eye, and one totally blind.

Those cases where the gonococcus was found in the conjunctival secretion



numbered 82, or 31·7 per cent. of the total cases; the results were as follows:—

61 cases were cured without defect; 13 were cured with some loss of vision; while no child was completely blind—8 died from other causes during the course of the disease.

In addition, 111 cases were examined for the gonococcus, but on examination proved negative. 92 babies recovered without defect, 3 had some defect, while 2 were totally blind. (Details of these two cases in Reception House Report.)

Summing up the results, it may be said that out of 259 cases 81 per cent. were cured without defect, 6·6 per cent. had some loss of vision, while 1·2 per cent. were totally blind; 3·1 per cent. were removals, and 8·1 per cent. died of intercurrent diseases.

TABLE SHOWING THE NUMBER OF CASES OF OPTHALMIA NEONATORUM ASSOCIATED WITH SYPHILIS.

Result.	Gonococcal.	Non-gonococcal.	Total.
Cured, ... ..	8	4	12
Corneal defects—			
One eye good, ... ..	...	1	1
„ fair, ... ..	2	...	2
„ blind, ... ..	4	...	4
Both eyes good, ... ..	...	...	...
„ fair, ... ..	...	1	1
„ blind, ... ..	...	2	2
Dead, ... ..	...	2	2
	14	10	24 + 1 = 25

The remaining syphilitic case removed, and could not be traced. Twenty-five cases of the 259 cases were children suffering from congenital syphilis, giving a percentage of 9·6.

TABLE CONTRASTING THE SEVERITY OF THE DISEASE IN (1) NON-SYPHILITIC + OPTHALMIA NEONATORUM, AND (2) SYPHILITIC + OPTHALMIA NEONATORUM.

	Non-syphilitic + Ophthalmia Neonatorum.	Syphilitic + Ophthalmia Neonatorum.
Cured, ... ..	81 per cent.	48 per cent.
Defective vision, ... ..	6·6 „	32 „
Totally blind, ... ..	1·2 „	8 „
Removed, ... ..	3·1 „	4 „
Dead, ... ..	8·1 „	8 „

The causes of death are as follows:—

Prematurity,	...	...	...	...	...	5
Birth Debility,	...	...	...	...	...	4
Respiratory Affections,	...	...	...	...	...	4
Enteritis,	...	...	...	...	...	2
Congenital Syphilis,	...	...	...	...	...	2
Convulsions,	...	...	...	...	...	2
Measles,	...	...	...	...	...	1
Overlain,	...	...	...	...	...	1
						—
						21
						—

The usual method of working the notification of Ophthalmia Neonatorum is to send a Nurse to the infant's home immediately on receipt of a notification. (She is provided with an Ophthalmic Bag and printed instructions.) The Nurse makes some preliminary enquiries. If the case is being treated by the family medical attendant, it is left alone, the Nurse calling at the end of two months to learn the result of treatment. If the case is not already under treatment, she proceeds to irrigate the infant's eyes. All bad cases are urged to go to the Reception House for treatment. Where the case does not seem severe, or where the parents will not submit to hospital treatment, home treatment is carried out. The treatment consists in freeing the infant's eyes from pus, and applying some antiseptic to the diseased eye. In some instances this can be done without difficulty, but in premature infants, and where the palpebral fissure is narrow or there is much swelling, it requires considerable dexterity to cleanse the eye. Premature and puny infants stand irrigation badly, showing signs of collapse if not carefully watched. In all instances home treatment is unsatisfactory; difficulties arise on every side. The parents (one or both) nearly always protest that the trouble is due to a "whiff of cold," and that the application of water will increase the trouble. Then again it is often impossible to get any one to hold the baby, and as the mother is usually in bed at the time, one Nurse is incapable of attending to the eyes and supporting the infant at one and the same time. In one instance, T—, the family hastily departed, leaving the baby and me alone in an unfurnished room. There were no chairs—no dishes; fortunately a small fire was sufficient to heat some water, and by laying the baby on a box with its head over the sink I was able to clean the eyes. The mother and other relatives remained outside until I was ready to leave. The family disappeared a few days after this, and could not be traced. This illustrates the type of household where home treatment is useless.

In another case, F—, the house was destitute of furniture, food and fire. One neighbour came to our assistance with hot water, another brought a chair, and a third loaned a basin and pail, and all were desirous of giving assistance. But it was noticed that the borrowed furniture was returned to the owner after the visit, and at every succeeding visit the same effort had to be made before treatment could be carried out. In this case some laths from the bed were taken to make a fire. After a few days useless treatment the mother was persuaded to come with the infant to the Reception House, where an absolute cure was effected in the course of five weeks.

This case illustrates the futility of attempting home treatment, unless the parents are able to help. If the mother has the intelligence to wipe away the pus as it forms, and if the Nurse irrigates twice daily, then the case may do well, but if the mother is careless or timid, good results are impossible.

Often the mothers act on the suggestion of neighbours, and it is a common occurrence to find the following "remedies" being applied:—Castor oil, castor oil plus white of egg, breast milk, cold tea, saliva (preferably a "fasting spittle"), poultices of bread and sour milk.

## SUGGESTIONS FOR CONSIDERATION.

(1) Infantile Ophthalmia or Ophthalmia Neonatorum should be more clearly defined than it is at present. It should include "any inflammation of the eyes accompanied by discharge in the newly born," and should be notifiable within a certain number of hours after its appearance.

(2) There is need for complete investigation of the circumstances and clinical conditions under which the disease occurs. The history of the labour becomes of great importance, and can only be usefully ascertained by the Medical Assistant herself visiting and making the enquiry. The nature of the organisms present in the non-gonococcal cases requires a detailed enquiry.

(3) Compulsory removal to hospital should be insisted on where home treatment is useless. The records of the Reception House show that even serious cases respond to treatment, and in this connection I would mention the valuable advice which has been freely given by Dr. A. Maitland Ramsay.

(4) The appointment of a Consultant Ophthalmic Surgeon for cases of Ophthalmia Neonatorum.

(5) The gratuitous distribution of some effective prophylactic solution to every physician or certificated midwife who applies for it.

FLORENCE MANN.

Sanitary Chambers,  
Glasgow, 26th February, 1913.

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REPORT ON THE RESULTS OF TREATMENT IN THE RECEPTION-HOUSE FROM  
17TH FEBRUARY, 1912, TO 31ST DECEMBER, 1912.

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Number admitted,	...	...	50
Number dismissed,	...	...	43, of whom 23 were males and 20 females.
Still under treatment,	...	...	7

Of the 43 cases whose records are complete the following information is available:—

*Nature of Attendance at Birth.*

Doctors.	Institutions.	Institutional Nurse.	C.M.	Others.	Total.					
5	...	3	...	10	...	14	...	11	...	43

*Onset of the Disease.*

- 12 hours.	1 to 4 days.	4 to 8 days.	After 8 days.	
3	...	23	..	14
			...	3
				...
				43

*Age on Admission.*

4 to 8 days.	8 to 21 days.	+21 days.	
5	...	26	...
		12	...
			43

Average days in hospital—33.



*Result of Treatment.*

	Gonococcal.	Non-gonococcal.	Total.
Both eyes cured—no defect, ...	17	13	30
Corneal defects—			
One eye injured, but sight good,	2	—	2
"      "      fair,	2	—	2
"      "      bad,	3	—	3
Both eyes injured, but sight good,	—	—	—
"      "      fair,	1	2	3
"      "      blind,	—	2	2
Infant died, ... ..	1	...	1
	<u>26</u>	<u>17</u>	<u>43</u>

The following Table indicates those cases where *Syphilis* was present:—

	Gonococcal.	Non-Gonococcal.	Total.
Both cured, no defect, ... ..	6	4	10
Corneal Defects--			
One eye affected but good, ...	2	—	2
"      "      fair, ...	1	—	1
"      "      blind, ...	3	—	3
Both eyes affected but fair, ...	—	2	2
"      "      blind, ...	—	2	2
	<u>12</u>	<u>8</u>	<u>20</u>

## OPHTHALMIA NEONATORUM TREATED IN THE RECEPTION HOUSE.

The unsatisfactory nature of home treatment had been experienced almost from the beginning of the compulsory notification of Ophthalmia Neonatorum, but it was not until the 17th February, 1912, that the difficulty became acute.

The twin girls of Mrs. R. were the first cases to be admitted, because the disease was not being controlled by careful and lengthy home treatment on the part of the Nurses. Since then the Ward has never been empty, the greatest number of babies at one time being 12, and nursing mothers 7.

The routine treatment of the disease is as follows:—The Nurse's eyes being protected from infection, the conjunctival sac is irrigated every two hours day and night with normal Saline solution, and all the stringy pus removed from the retrotarsal folds. Morning and evening a few drops of a 25 per cent. solution of Argyrol is dropped in, followed by a 1 per cent. solution of Atropine. On admission, or if the discharge remains profuse a solution of Silver Nitrate, 1 or 2 per cent. is applied once daily. This application of a silver preparation is continued with diminishing frequency until the discharge diminishes, the irrigation with Saline solution going on until the eyes are free from pus. Corneal complications are treated as they arise. It is the custom to keep the infant in hospital for four or five days after all discharge has ceased, and bacteriological examination of a swab has proved negative, and on being dismissed the infants are visited in their own homes by the Nurses. Where there is defective vision the child is referred to the Ophthalmic Institution for treatment.

Where the infants are breast-fed the mothers are admitted for the purpose of acting as wet-nurses, but in no case has a mother undergone treatment. 22 mothers have been in the house, and of these 10 had leucorrhœal discharge before the babies' births. The mothers did not desire advice, and resented the suggestion that treatment might be necessary.

Where the mother is unable or unwilling to go into the Reception House, or where the infant is already artificially fed, a mixture of cow's milk, water, cream, sugar, and lime water is given. It is surprising to find that almost invariably the child digests this mixture well, and rapidly puts on weight in spite of the concomitant eye affection. The exception to this is in the case of Syphilitic children, who are constantly suffering from digestive derangements. The proportion of Syphilitic cases among those admitted for treatment is 46·5 per cent.

On admission the infants are grouped according to their general nutrition—24 were well nourished; 10 were below the average; 9 were badly nourished. Those children who are only fair or who are in bad condition are rubbed with hot olive oil after their morning bath. The fat seems to be absorbed readily by inunction: even more is absorbed than can be digested. It has been noticed that many of the badly nourished children were verminous, suffered from intertrigo, aphthous-stomatitis, all of which indicate neglect. The rapid improvement which manifested itself in their health was due to cleanliness, proper clothing, regular feeding, and not to any special treatment.

All the cases treated in hospital were of a severe type, many of them having corneal ulcers, and in two cases being totally blind in both eyes on admission. Swabs were taken in all instances, and when one proved negative another swab was examined, but it must be remembered that antiseptics were constantly being applied, and this fact may account for the low percentage of gonococcal cases compared with the severity of the disease. 26 cases, or 60·5 per cent., showed the presence of the gonococcus, 39·5 cases proving *negative*. In 17 cases the disease ran its course without ulceration of the cornea; in the remaining 9 infants there were varying defects in vision; 7 had perfect vision in one eye but defects in the other, these defects ranging from faint scars which will probably disappear (two cases) through the two cases where the scars are extensive to the three who are completely blind in one eye. The three who are completely blind in one eye all suffered from Syphilis. The history of these cases is as follows:—

W. A., admitted when eight days old. The birth was attended by a midwife, who did not notify the case until the eighth day, although the eyes had been discharging since the second day. On admission to hospital the left cornea showed a deep ulcer, central in position, covered with a yellow slough. The right cornea was clear. Both eyes were discharging freely, and the infant presented signs of nasal obstruction (snuffles). The baby was about three weeks premature, and was very poorly nourished, its weight being 5 lbs. 8 ozs. The usual routine treatment plus mercurial administration was carried out, and at the end of two months' stay in hospital the child was dismissed with a complete opacity of the left cornea, a perfect right eye, and in good general condition, weighing 7 lbs. 14 ozs. The parents in this case are careless and dirty, and have since been reported to the Parochial Authorities for neglect.

A. T. was attended at birth by an Institutional Nurse. The history is that the right eye became swollen, and discharged on the third day; the left was affected, but to a less degree. The case was notified on the seventh day, and on Nurse visiting she advised the mother to take the baby to the Reception House. The mother refused, and it was not until the infant was 14 days old that the mother consented to have him removed to hospital. On admission his general state of nutrition was good, the weight being 7 lbs. 9 ozs. A deep ulcer occupied two-thirds of the right cornea; the eye-lids were much swollen; the discharge thick, yellow, and abundant. The left eye was slightly affected. He had an offensive blood-stained nasal discharge. On being dismissed after eight weeks' treatment the left eye was perfect, the right totally blind, and both free from discharge. As is the custom before dismissal,

a swab was taken, and an examination for gonococci proved *negative*. Five days after leaving hospital the mother brought the infant to me for advice. The blind eye was free from discharge, but the "sound" eye was swollen and filled with pus, which on examination showed the presence of the gonococcus. This "secondary" infection yielded easily to treatment, and left no defect. As in the previous case, this mother is dirty and careless.

*G. R.*, attended at birth by Institutional Nurses, the left eye becoming affected on the sixth day. The case was notified on the seventh day, and the eyes were irrigated twice daily by the Corporation Nurses and swabbed out two-hourly by the grandmother. A small ulcer appeared on the left cornea on the fifth day of the disease, but it did not seem to be spreading until the eighth day of the disease, when it suddenly became much larger and deeper. The mother accounted for this fact by explaining that the eyes had not been cleaned for twelve hours, because she was afraid to touch them and the grandmother had been called away. With difficulty the mother was persuaded to accompany the baby to the Reception House. On admission the infant was fairly well nourished, but showed signs of neglect. It was dirty, verminous, and had intertrigo and stomatitis. It had also a nasal discharge. The left cornea had a deep ulcer, which perforated on the fourth day after being admitted to hospital. The right eye was swollen a little, and for two days the right cornea became cloudy, but cleared up without ulceration taking place. The child was dismissed totally blind in the left eye, but with perfect vision in the right.

#### TWO CASES OF TOTAL BLINDNESS.

*T. B.* was three months old when the mother came for advice. She stated that the eyes were perfectly well until two weeks previously. On admission the infant was in very bad condition, emaciated, its weight being 6 lbs. 6 ozs., a feeble pulse, and the skin in a state of furunculosis. It appeared to be suffering from Congenital Syphilis. On admission there was complete sloughing of the cornea of both eyes, and profuse discharge of foul smelling pus from them. This discharge did not show the presence of the gonococcus. After four weeks' treatment the eyes were free from pus, although there was complete corneal opacity. The infant was dismissed, but died five days later, the cause of death being given as Congenital Syphilis. It is of interest to note that a previous child in this family had Ophthalmia Neonatorum, and at times has a purulent discharge from the eyes. It would be profitable to know if the latest baby became infected from the mother's vaginal discharge or from the conjunctival discharge of the older child.

*A. M.*—This is an illegitimate baby, deposited at Mrs. M.'s door, and supposed by her to be her daughter's child. No previous history is obtainable. On the seventeenth day after birth Mrs. M. became alarmed at the purulent discharge which poured from both eyes, and took the child to the Eye Infirmary. On being notified, Nurse visited the case, and thought it advisable to remove the child to the Reception House. On admission the infant was fairly well nourished, weighing 6 lbs. 13 ozs. There was profuse purulent discharge from both eyes, and this discharge did not show the presence of the gonococcus. The cornea of both eyes was opaque, probably due to a congenital interstitial keratitis. This was the only sign of Syphilis. The infant remained under treatment for five weeks, and was dismissed in good condition, but totally blind.

It will be noted that all these bad cases were complicated by Congenital Syphilis.



One child died in hospital while under treatment, Joseph C., a puny, frail child, whose eyes cleared without ulceration—the swab showed the presence of gonococcus. The child was neglected at home, and when taken into hospital was verminous, dirty, and bronchitic. He died after being three weeks under treatment. The death was certified as Birth Debility.

Although their occurrence has been watched for, few of the recognised complications of Ophthalmia Neonatorum have been present. There has been no case of Arthritis, Synovitis, Vaginitis Vubitis, or Glandular Swelling.

Better results could be obtained if the hospital treatment were made compulsory. As a rule, time is lost in persuading the parents to submit their children to it. At first I insisted on the mother accompanying her infant. From the experience I have had, however, I am now willing to take the baby alone. The mothers are not accustomed to discipline, and it is not always easy to persuade them to nurse their babies at the prescribed intervals. On the whole, I am of the opinion that a suitable substitute for mother's milk can be devised, and the child has the benefit of regular feeding. During the time the Reception House has been used for Ophthalmia Neonatorum there has been two cases of Infectious Disease\*—one of Measles and one of Whooping-cough. The children recovered and did well.

FLORENCE MANN.

Sanitary Chambers,  
February 25, 1913.

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#### INSTRUCTIONS TO NURSES *RE* OPHTHALMIA NEONATORUM.

The Nurse in whose district a case of purulent ophthalmia occurs will visit the case without delay. At her first visit she will fill in a report of the case on the card provided for the purpose, and will enter that and subsequent reports in her daily report book.

Where a child is under medical treatment further visits are unnecessary with the exception of a final visit within two months to note the result of treatment.

In cases where medical treatment cannot be obtained the Nurse will proceed as follows:—

The infant is supported by the mother while its head is held between the Nurse's knees. With strict antiseptic precautions the Nurse will gently irrigate the conjunctival sac with weak saline solution, gently removing any stringy pus with saline swabs. Care must be taken to avoid injuring the eye with the finger nails, or using too great pressure on the eye. (The Nurse will be careful that none of the retained secretion from the infant's eye spurts up into her own eye.) All the pus having been washed away, one drop of the atropin solution followed by one drop of the argyrol solution should be instilled into the eye. The mother of the infant should be instructed as to the infectious nature of the disease, and should be told to bathe the eyes every two hours with cold boracic solution, which should be made up fresh for each application. The ointments (atropin and argyrol) should be given to the mother, with direction to put a piece the size of a barleycorn into the eye morning and evening.

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\* One, a case of measles, sickened on the day following admission, and the other, whooping-cough, within a week thereof.

The Nurse will be careful to thoroughly wash and disinfect her hands and nails at the conclusion of each visit.

Each Nurse will be provided with an Ophthalmia Bag, and she will be held responsible for its contents.

*Leather Bag with Outside Pocket and Washable Lining.*

Apron,  
Jaconette, 2 pieces,  
Towels,  
Cotton Wool,  
Glasses,  
Gloves,  
Swab Outfit,  
Sodium Chloride (powder),  
Argyrol Solution (25 per cent.),  
Argyrol Ointment (50 per cent.),  
Atropin Solution and Ointment (1 per cent.),  
2-pint Douche Can, with tubing and nozzle,  
Scissors.

Sanitary Chambers,  
Glasgow, 15th August, 1911.

## APPENDIX IV.

REPORT BY THE MEDICAL OFFICER OF HEALTH ON INTERIM REPORT  
OF THE DEPARTMENTAL COMMITTEE ON TUBERCULOSIS AND  
CIRCULARS RELATIVE THERETO.

On 29th May last the Local Government Board issued to Town-Clerks a circular (Public Health No. III., 1912) regarding those Sections of the National Insurance Act which have in view the prevention and treatment of Tuberculosis.

This circular recites the special powers conferred on Central and Local Authorities by the Insurance Act, and indicates the conditions which must be complied with before any grant in aid of building funds for institutional treatment can be considered. It also recommends Local Authorities to instruct Medical Officers of Health to prepare reports on the requirements of their several areas, and specifies several points on which detailed information is desired. (Sixth Section (1) and (2)).

The principal object of the present Report is to give effect to that instruction. In doing so it will be necessary also to consider—

- (1) The Interim Report of the Departmental Committee on Tuberculosis (the Astor Report), and
- (2) Certain Sections of Circular No. 1 C 2 of the Scottish Insurance Commissioners, dated 16th May, 1912.

The Astor Report was issued prior to both circulars, and recites the various efforts which have been under discussion during the past decade for the administrative treatment of Consumption. It also sketches in a general way the basis of any Scheme which is intended to give effect to the requirements of the Insurance Act.

We may consider, therefore, in the first place, how far existing methods of dealing with Tuberculosis in Glasgow, when expanded on the lines approved by the Corporation on 29th December last,<sup>1</sup> will give practical effect to the measures now suggested.

It may be recalled that the scheme at present in operation in Glasgow is based on Compulsory Notification of Pulmonary Tuberculosis.<sup>2</sup> It provides certain measures for supervision and advice which are supplemented in some cases by material help obtained from Poor Law and charitable sources obtained at the request of the Dispensary Staff.

When notification was introduced, the City was mapped out for administrative purposes into six areas, within which Dispensary facilities were afforded. Five of these are, with the consent of the Parish Councils of Glasgow and Govan respectively, housed in Poor Law District Dispensaries, but are conducted under the direction of, and by a staff appointed by, the Corporation, while a sixth area was retained in the Central District of the City in association with a sixth Dispensary which is housed in the Sanitary Chambers, but conducted by the Glasgow and West of Scotland Branch of the National Association for the prevention of Consumption. By agreement with the Directors of the Association, this Dispensary is used mainly for the selection of male patients for admission to Bellefield Sanatorium who are

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(<sup>1</sup>) At this date the Corporation agreed :—

- (a) To recommend that the Hospital Buildings about to be erected on Robroyston Estate be made available for the treatment of consumption; and
- (b) To confer with the School Boards and the Parish Councils in the City regarding a proposed Country Home with which might be associated an Open-Air School for tubercular children; and also regarding the Home Treatment of Consumption, where assistance financial or otherwise is required.

(<sup>2</sup>) The disease is compulsorily notifiable in Glasgow for a period of three years, which expires in December next.



residing either within its own district<sup>1</sup> or are referred to it from the District Dispensaries. Another Dispensary for Tuberculosis also carries on work in Glasgow in connection with the Bridge of Weir Consumptive Homes, but it is meanwhile left aside as being outwith municipal direction.

To each of the Dispensaries a physician is attached, those under municipal direction being in four instances staffed by part-time officers appointed by the Corporation, while the physician to the fifth is a whole-time Assistant to the Medical Officer of Health. Each Dispensary is attended by a district tuberculosis nurse, who also supervises in their own homes patients requiring help in this form.

The movement begins by a visit to the household of each patient notified, unless the medical attendant on notifying indicates that this is unnecessary. At this visit the condition of the house is noted—the possibility of providing separate sleeping accommodation for the patient is ascertained—the family history in relation to Tuberculosis is enquired into—the nature and place of employment of the patient is noted—in general, such elementary facts are recorded as will indicate the suitability or otherwise of the house for home treatment, and the resources of the family for providing it.

A case sheet is then prepared, and allocated to the Dispensary District in which the house is situated.

On this allocation of the case sheet the nurse of the district visits the family, reports more fully on the clinical appearances to the Dispensary Physician, and where there is no medical attendant, advises the patient to present himself—when able to do so—at the Dispensary. Where material help is required she makes application to charitable agencies or the Poor Law.

The other members of the family are advised to attend the Dispensary for examination, and during this or subsequent visits to the household the nurse frequently discovers or is informed of members of other families whose appearance or history suggests the desirability of a similar examination.

To the Dispensaries also are referred any children discovered during School Medical Inspection who present symptoms suggesting tuberculosis.

The work of all the Corporation Dispensaries is under the general supervision of an Assistant to the Medical Officer of Health (Dr. Macgregor), who also takes charge of one of them, and patients discovered at any of them as suitable for sanatorium treatment are referred to the Dispensaries attached to Bellefield or Bridge of Weir.

These Dispensaries are situated in selected areas at points most convenient for the population they are intended to serve. Collectively they form outposts of the Public Health Department, and notwithstanding certain limitations in their function which will be referred to afterwards, each becomes in its own district a centre for co-relating the various official and voluntary sources of advice and assistance requisite in the circumstances. But it has not, in our experience, helped in the discovery of incipient cases, as formerly understood, or to any great extent in distinguishing on definite grounds between the suitable and unsuitable applicant for sanatorium treatment. For this purpose beds are necessary in many cases, and the Interim Report recognises the defect in existing Dispensaries by recommending the addition of beds thereto in certain circumstances. On the other hand, it has proved invaluable in the discovery of many—mostly older children and adolescents—whose general condition suggests the development of clinically recognisable tuberculosis in some form in later years.

To meet the defect arising from lack of beds, and in order to make provision for dealing with tuberculous children of the type just referred to, the Corporation have, since the issue of my Report of October, 1911, resolved—

(1) To set apart from 150 to 170 beds in the hospital to be erected at Robroyston for the combined purposes of isolation and treatment, and the discovery of such cases as may benefit by sanatorium treatment, and

(2) To erect a Home or Preventorium in the country for the residential treatment of children.

In connection with the latter, the School Board of Glasgow has agreed to supply the teaching staff necessary to continue the education of such children.

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(<sup>1</sup>) This describes the practice followed in selecting children resident in Glasgow, but about 30 per cent. of the admissions are of persons residing beyond the City boundaries.

## THE SCHEME OF THE INTERIM REPORT.

It should be observed that in the Report, as in the Insurance Act itself, the term used is tuberculosis, and not phthisis only, while the former indicates that "Sanatorium Benefit" may in given circumstances be applied to home treatment (par. 15).

Both also contemplate the possibility of extending sanatorium benefit to the dependants of insured persons (par. 29 of the Report and Section 7 (1) of the Insurance Act). No provision made by the Local Authority, however, could be selective in this sense, and the interim reporters appear to have had this in view in the statement that any scheme which is to form the basis of an attempt to deal with the problem of tuberculosis should be available for the whole community (par. 4 (1)).

It will be well indeed if this objective becomes the keynote of the movement, and the Report makes obvious and repeated reference to the risk of overlapping and waste which will result if the several Authorities responsible for portions of the work fail to co-operate and render mutual assistance. At the same time it should be remembered that the Local Authority alone can make provision for all ages and for the community as a whole.

Any scheme devised to meet these requirements would include both insured persons and their dependants, as well as school children, while a movement designed solely to meet the requirements of any of the groups would fall short of the primary requirements of a complete scheme.

Moreover, the substitution of the term tuberculosis for consumption is not without significance. It includes all forms of tuberculous disease, although clinically these fall into two widely divergent groups, which will require different methods of administrative treatment. Tuberculosis of the lung is the form of the disease most prevalent at the insured ages, but at younger ages tuberculosis assumes a diversity of form, attacking the bony structures, the glandular system, the abdominal organs, and also the serous membranes lining internal cavities such as the brain.

This extension of the definition in reality simplifies the problem for the Local Authorities, for the prevention of tuberculosis coincides more closely with the natural line of development of the work of an Authority charged with the promotion of Public Health than the clinical treatment of a disease which is already established.

Indeed, paragraph 17 of the Report states that the scheme which the Committee recommend for the prevention, detection, and treatment of the disease is intended to complete Public Health administration in respect of tuberculosis.

## THE UNITS OF THE SCHEME.

The essential units of the scheme recommended by the Committee are two in number. They are named the Tuberculosis Dispensary and Sanatorium, Hospitals, &c., in which institutional treatment is given (par. 17), but they are defined in terms sufficiently elastic to include any system under which treatment by modern methods may be applied (par. 15 and 19).

## DISPENSARIES.

It is estimated that in Urban Districts one Dispensary should be sufficient for every 150,000 or 200,000 of population.

At the lower standard this means five Dispensaries for the present population, whereas, as we have seen, we have already (excluding the Bridge of Weir Dispensary) six in operation, which is roughly equal to 1 in fully 130,000.

The first unit of the scheme is therefore already in operation, and only requires expansion on the lines which experience has shown to be necessary.

## DEFECTS IN EXISTING DISPENSARIES.

The need for beds was soon felt, and this will now be supplied—not at the Dispensaries as the Report suggests, but in a separate hospital at Robroyston, where cases requiring this form of treatment will be dealt with collectively from all the Dispensaries.



The premises themselves also require some modification for the special purpose for which they are intended.

Through the courtesy of the Parish Councils, their District Dispensaries were placed at the disposal of the Corporation, in order that utility of such provision might be ascertained. To this extent they have served excellently, but they are not well adapted for extension of the movement.

In my Report of October last I purposely held over consideration of this, and may resume it here.

Generally their accommodation is limited. They are not adapted for teaching purposes (Interim Report, Recommendation 8), and they lack sufficient dressing-room accommodation. They are not available on every day of the week, nor for a sufficient number of hours on each day or in the evenings, and men and women must be taken on separate days.

While some change is necessary, I question the desirability of erecting separate buildings for the purpose.

All the accommodation required might be obtained in premises on the street floors of neighbouring tenements, avoiding, however, main traffic routes, as the noise is a serious handicap in examining the condition of the lungs of these patients.

Where buildings can be adapted to the purpose, the cost of alteration is estimated by the Departmental Committee not to exceed £250 per Dispensary.

#### THE SECOND UNIT IN THE SCHEME—INSTITUTIONAL ACCOMMODATION.

The Report indicates that bed accommodation may be required in the proportion of one sanatorium bed for every 5,000 of population, and one hospital bed for a similar number. For the present population this means 160 beds in each case.

The projected accommodation of Robroyston will give us the use of 150 to 170 beds on a 2,000 cubic feet standard, while the Country Home will begin with a minimum of 50 beds, but is intended ultimately to accommodate from 250 to 300 persons.

This latter I am disposed to regard as the true sanatorium, in the sense that it will tend to prevent the occurrence of phthisis in a certain number of those who are prone to it.

The hospital beds, on the other hand, will, in addition to affording isolation for consumptives who suffer from the disease in a progressive form, definitely assist in the selection of those who might be further benefited by the modern method of graduated exercise with the object of producing auto-inoculation.

To what extent further treatment in this sense may be possible in the same institution is a question which experience alone will decide. It should be possible at the beginning of the movement to provide in Bellefield or Bridge of Weir for any who cannot be so dealt with in Robroyston.

In any case I doubt whether it is at the moment administratively desirable to suggest the provision of further municipal beds, until the value of those already agreed upon has been ascertained, and possibly also until we have made a beginning with the more urgent problem of housing the Consumptive family after the return of one of its members from a period of institutional treatment.

In a population which has over 104,000 persons housed in single rooms, and over 471,000 in not more than two, the acuteness of this aspect of the problem will be readily appreciated.

In reporting the experience of the first year of compulsory notification, I had occasion to show that, of 2,400 cases treated at home, 500 slept in the same room, and 1,100 shared the same bed as 1,200 other persons in the one case and 1,600 in the other.<sup>1</sup>

Conditions like these are not to be remedied by any length of institutional treatment, and one despairs of the result when the institutional case returns to his old surroundings. Despite the assistance which Dispensaries and Sanatoria may afford the battle with Consumption must be fought out in the homes of the people, and the improved housing of the consumptive will become an essential element in the Scheme.

<sup>1</sup> Report on the Administrative Treatment of Pulmonary Phthisis by the Medical Officer, October, 1911.



If Sanatorium benefit can be applied to the relief of these conditions by providing, as is done in some German towns, the additional bed or room as well as food and clothing which may be required, the other measures which have been discussed will gain much in their efficiency.

Apart from this, the number of Tuberculous patients already obtaining institutional treatment is not inconsiderable.

The latest figures available are for 1911, and of a total of 2,326 cases of pulmonary tuberculosis notified 41 per cent. were treated in institutions in the following proportions :—

PULMONARY PHTHISIS—1911.				Percentage treated in Institutions.		
	M.	F.	Total.	M.	F.	Total.
Cases registered, ...	1,315	1,011	2,326	100	100	100
Cases treated in Poor-law						
Institutions, ...	437	260	697	33·2	25·7	30
General Hospitals, ...	54	29	83	4·1	2·9	3·6
Sanatoria—						
Bellefield, ...	99	—	99	9·7	4·5	7·4
Bridge-of-Weir, ...	16	42	58			
Lanfine, ...	10	1	11			
Others, ...	2	2	4			
Total receiving treatment in Institutions—	618	334	952	47·	33·	41

This takes no account of the number receiving institutional treatment for the other forms of tubercular disease in General and Special Hospitals, Fresh-Air Fortnight Homes, and Homes for Invalid Children.

It is difficult to state the number of these with any degree of precision, but I have returned to the question in the next part of the Report in discussing the details required by the Local Government Board.

It may be further noted that 560 of the cases notified last year were in more or less regular attendance at the dispensaries; that 1,732 cases in all were under supervision at home by the nurses; 1,302 being cases notified during the year; and 428 cases notified during 1910.

#### THE PREPARATION OF SCHEMES.

In preparing Schemes the Local Government Board require detailed information under several headings, which may be considered separately :—

- A. (a) The number of beds available in existing institutions and the type of cases treated therein.

These are stated in Appendix, Table I.

- (b) Number of beds provided in Shelters at patients' homes.

None are in existence, and few houses in Glasgow provide facilities for this form of bed accommodation.

- (c) Dispensaries, or other out-door departments. The working of these has been already described in detail, and a tabulation of the Corporation and other Dispensaries forms Appendix, Table II.

- (d) Medical and Nursing Staff provided for home attendance or visitation.

##### *Medical Staff—*

One whole-time officer who is on the staff of the Medical Officer.

Four part-time assistants who each take charge of separate dispensaries.

##### *Nursing Staff—*

Four nurses, each attached to a separate dispensary which she attends, in addition to visiting and supervising a considerable number of cases at home.

- B. An estimate of the bed accommodation required.

This has been already discussed so far as the information available admits.

C. A statement of other institutions for the treatment or prevention of tuberculosis, &c., such as open air school, cripple homes, &c., expressly adapted for the treatment of tuberculosis children.

See Report and also Appendix Table III.

D. Outlines of a Scheme of completely co-related Administrative Action against Tuberculosis in the area of the County or Town or combined areas, care being taken to state the salaries and general arrangements for the staffs proposed.

In the Scheme which has been described in the preceding pages there are many obvious lacunæ which experience has revealed. Some of these may be further considered.

#### HOME TREATMENT AND AFTER CARE.

The existing Dispensary Staffs were not designed to carry out home treatment, and cannot on their present establishment do so in the sense of the Insurance Act.

To multiply the Medical Staff to the extent necessary to accomplish this would not, I think, prove sound policy, and any Scheme which will efficiently carry out both home treatment and after care must, I think, rest primarily on co-operation between the medical practitioners in the several districts and the tuberculosis officers attached to the dispensaries.

It is likely that this home supervision will ultimately extend also to some forms at least of non-pulmonary as well as pulmonary forms of tuberculosis. Much is, of course, already being done by charitable agencies in institutions and otherwise for every form of non-pulmonary tuberculosis, but the extension of Sanatorium benefit to dependants, and the returns of sickness which may under Section (60) (1) (a) be obtained by the Insurance Commissioners and forwarded to Local Authorities, will disclose these forms of the disease in a manner which will render their systematic treatment possible.

#### POOR LAW CASES.

No completed Scheme can leave aside the question of Poor Law cases, but the precise time when they can with public advantage be included within the Local Authority Scheme will fall to be determined by local conditions which may be expected to vary.

At the present time Poor Law cases in Glasgow form a very appreciable portion in the total volume of cases occurring. In the first year of Notification they formed 37 per cent. of the primary notifications (1,171 out of 3,205), but 46 per cent. of the cases ultimately found parochial relief.

In the year 1911 the proportion of Poor Law cases among the primary notifications was 29 per cent., while 73 per cent. of those treated in Institutions were Poor Law cases.

In reporting last year on the Administrative Treatment of Pulmonary Phthisis (p. 91), I indicated the line of separation which should, I think, for the moment distinguish between the case to be provided for by the Public Health Authority on the one hand and the Poor Law on the other.

The operation of the Insurance Act will in all likelihood tend to reduce the annual numbers claiming Poor Law relief from this cause, but were the Local Authority to undertake at the moment the provision of institutional accommodation for so large a number of homeless consumptives, I believe it would imperil the success of their scheme in other, and what seem to me, more urgent directions.

#### THE RECONSTRUCTION OF THE DISPENSARIES.

The Report indicates four elements of a Dispensary Staff, viz.:—medical, nursing, secretarial, and dispensing, and all these are represented in our existing Institutions, but it would be well to add a dentist either to this or the Robroyston Staff.

It recommends that each Dispensary should have a Tuberculosis Officer, with a salary of not less than £500 per annum, and one or more whole-time Medical Assistants as required.

When several dispensaries are necessary within the area of one Local Authority and of one Insurance Committee I am disposed to think that they should be treated together as one dispensary group under a Supervising Tuberculosis Officer, with several whole-time assistants.

The Supervising Officer would co-ordinate the work of the dispensaries and home treatment within the area of each with that of the hospital, the country home, and such other institutions as at present deal with the non-pulmonary form of tuberculosis.

He should be on the staff of the Public Health Department in order to ensure that structural defects in housing conditions may be dealt with, and should be in close touch with the School Medical Inspectors, so that the institutional treatment of tuberculous conditions discovered among school children would become part of the general movement.

The ultimate selection of cases for hospital and any of the various fresh-air homes referred to, would rest on his decision, and to begin with, at least, he should take medical charge of the Country Home about to be provided by the Corporation.

The municipal dispensaries, as we have seen, are six in number, including that of the National Association.

On a reconstructed basis with more frequent diets for consultation, these might be reduced to five, and the present part-time medical officers be replaced by three whole-time officers.

#### FINANCE.

Obviously a Scheme designed, as the foregoing is, to provide for all forms of Tuberculosis, can only develop by taking the points in the order of their importance.

The Insurance Act makes certain financial provisions, which, although primarily available for the pulmonary forms of the disease, may, in given circumstances, be applied to Tuberculosis generally.

A sum also has been allocated to School Boards to assist in providing medical treatment in some cases at least, and part of this or a special grant may be available for the treatment of Tuberculous children. (See circular 448 of Scotch Education Department, 18th April, 1912.)

In a sense, therefore, the Corporation may move in this connection with the aid of an entirely new factor in public health administration, viz., the grant in aid.

The following represents, approximately, the proportion effeiring to Glasgow of the sums which during the discussion of the Insurance Bill were understood to be provided as grants in aid of buildings and for upkeep of Sanatoria. (The phrase "Sanatorium benefit" has now, however, been extended so that it may be applied in approved circumstances to home treatment.)

	1908.		
	U. K.	Scotland <sup>1</sup>	Glasgow <sup>2</sup>
Phthisis Deaths,	54,100	6,100	1,100
Building grant,	£1,500,000	£165,000	£27,500
Upkeep grant,	£1,000,000	£110,000	£18,333

(Throughout it was assumed that the grant to any locality was to be related to the sum raised locally by Local Authorities or otherwise.)

The above proportions are calculated on the number of deaths occurring in the several sections of the United Kingdom, but on a population basis the sum for Scotland is returned as £158,000, and makes the proportion of Glasgow about £26,333. (Int. Report, page 8 (2).)

#### COST OF DISPENSARIES AND SALARIES OF TUBERCULOSIS OFFICERS.

Int. Report (p. 13).

It has already been stated that the Interim Report estimates the cost of adapting and equipping Dispensaries at £250, and suggests that the Chief Tuberculosis Officer be paid a salary of not less than £500, with prospects of increase. The extension of the Nursing Staff will require consideration with the development of home treatment.

<sup>1</sup> Approximately  $\frac{1}{3}$ th of U. K.

<sup>2</sup> Approximately  $\frac{1}{3}$ th of Scotland.



## SANATORIA HOSPITALS AND COUNTRY HOMES, &amp;c.

## Int. Report (p. 15).

The cost of these institutions, it is stated, should not exceed £150 a bed, including site. In the recently erected Sanatorium at Ipswich the cost was about £250 a bed, exclusive of site, but including furnishings at fully £18 a bed, and I doubt whether the estimate in the report can be realised when it is not solely a question of adding beds to existing institutions. The Report (p. 27, par. 2), however, might be read to suggest that grants in aid of building will be refused if  $\frac{2}{3}$  of the total cost per bed exceeds £90.

## SANATORIUM STAFF.

The medical staff recommended in the Report for each unit of 200 hospital or sanatorium beds, includes 1 medical superintendent and 2 assistants. The superintendent to have a salary of £500 with house, and with prospects of increase.

As requiring early attention in the development of the scheme, attention should, I think, be given in the first place—

(1) to the provision of new dispensary premises.

(2) to pressing forward the provision of hospital and County Home accommodation.

It seems also desirable that the committee should get into early touch with the Provisional Insurance Committee.

A. K. CHALMERS.

Sanitary Chambers,  
Glasgow, 27th June, 1912.

APPENDIX.—TABLE I.

ACCOMMODATION FOR PULMONARY TUBERCULOSIS.

	Accommodation for	Duration of Residence.	Yearly Admissions.	Admitted from Glasgow.	Percentage from City.	How Admitted.
(A) SANATORIA.						
Bellefield, - -	Adult Males, 52	4 Months,	154 (1911).	107 (1911).	70	<i>Via</i> Dispensary of National Association for Prevention of Consumption.
Bridge of Weir, -	Males, 42 Females, 76 Children, 20 } 138	4 months or longer if necessary.	273 (1907). 340 (1911).	119 (1907).	43	<i>Via</i> Medical Superintendent at James Morrison Street Dispensary.
Victoria Infirmary,	Males. 3 Females, 4 } 7					
(B) INSTITUTION FOR ADVANCED CASES.						
Lanfine Home, Kirkintilloch,	44 (32 at present occupied)	No limit.	(1911) 16 beds 27 patients (1912) 32 beds (6 months) 32 patients.	11 (1911). 25 (1912).	40 78	

(C) ACCOMMODATION FOR OTHER FORMS OF TUBERCULOSIS.

General Hospitals.					Percentage Admissions for Tuberculous Affections.
Glasgow Royal Infirmary,	...	...	...	...	2
„ Western Infirmary,	...	...	...	...	5
„ Victoria Infirmary,	...	...	...	...	13
Royal Hospital for Sick Children,	...	...	...	...	20

APPENDIX.—TABLE II.

DISPENSARIES AND OTHER OUT-PATIENT DEPARTMENTS.

Glasgow Corporation Dispensaries, - -	{ 17 Broad Street, Mile-end. 255 Duke Street. 324 St. Vincent Street. 55 Possil Road. 24 Nicholson Street.	{ Reserved for Pulmonary Tuberculosis only.
Bellefield Dispensary, -	Sanitary Chambers, Mon- trose Street.	
Dispensary, - - -	James Morrison Street.	

OTHER DISPENSARIES :—

Glasgow Central Dispensary,	78 George Street.
Medical Mission Dispen- saries, - - - -	{ Oxford Street. Moncur Street.

Victoria Infirmary.  
Western do.  
Royal do.  
Sick Children's Hospital Dispensary.

## APPENDIX.—TABLE III.

HOMES FOR WHICH TUBERCULOUS CHILDREN ARE CONSIDERED SPECIALLY SUITABLE, THOUGH NOT RESERVED ENTIRELY FOR SUCH. (*CHILDREN SUFFERING FROM PHTHISIS ARE NOT ACCEPTED*).

Convalescent Homes.	Accommodation for	Duration of Residence.	Yearly Admissions.	Type of Case admitted.	Proportion from City.	Remarks.
Children's Convalescent Home, Dundonald	24	3 weeks or longer if necessary	(1910-11) 338	Not classified. A large proportion tuberculous	Mostly from Glasgow	Via Sick Children's Hospital, Queen Margaret Settlement, Charity Organisation Society
Children's Home Hospital, Aberfoyle	21	No limit	(1910-11) 55	47 tuberculous	Restricted to patients from Glasgow, Govan, and Partick	Via General Hospitals, usually post-operation cases
Biggart Memorial Home, Prestwick	140	No limit	(1911) 637	Gradually being reserved for tuberculous cases. 284 such admitted in 1911. (See under Open-air School)	Glasgow almost entirely	Via Tent Hall, Saltmarket
Ashgrove Home, Maybole	80	No limit	(1911) 563	Tuberculosis and rickets. Gradually being reserved for tuberculous cases	"	" "
Agnes Millar Wilson Home, Gareloch	76	No limit	(1911) 910	Being reserved for tuberculous cases	"	" "
<i>Cripple Schools—</i> Glasgow School Board	—	—	(1910) 90 tuberculous cripples admitted	—	Glasgow only	Via School Medical Officer
<i>Open-Air School—</i> At Biggart Memorial Home, Prestwick	20	—	Opened April 12, 1912—23 children admitted, 13 for tuberculous ailments	—	"	" "
<i>Home for Cripple Children—</i> Eastpark Home for Infirm Children, Maryhill, Glasgow	131	No limit	(1911) 55	42 per cent. of inmates tuberculous	"	

*Other Homes for Convalescent Children—*

- (a) Ravenscraig Home (Trinity Congregational Church Mission) with 13 beds—*via* Sick Children's Hospital.
- (b) Montgreenan Home (Sir James Bell), 12 beds for girls under 14.
- (c) St. Leonard's School Convalescent Home, Dundee, receives 18 to 20 children annually from Glasgow.

*Fresh-Air Fortnight Homes for Poor Children—*

Accommodation for 588 children—admissions (1911) = 5,506.



## APPENDIX V.

## POWER OF BOARDING VESSELS BY PORT LOCAL AUTHORITIES.

Dr. Chalmers read a paper <sup>(1)</sup> on the Power of Boarding Vessels by Port Local Authorities as follows:—

Dr. Chalmers explained that local circumstances must to a considerable extent influence the value of existing powers for boarding vessels. In the case of the Clyde, where the channel below Glasgow was in reality a comparatively narrow waterway of about 20 miles in length there was no spot where the ship might be brought to once it had entered, and inspection either of the ship or crew, if it were to be effective, could only be carried out at a point below where the channel began. This as he understood it might be contrasted with the Mersey where there was ample room for anchoring in the waterway without entering the docks and without obstructing navigation.

In these circumstances it became an important question how far existing legislation enabled them to discover sea-borne infectious disease which did not come under special regulations, and he believed the subject was important because of the almost complete absence of indigenous Smallpox in this country at the present time. The following supplied as good an illustration as any of the circumstances to which he had referred.

On the morning of a day in December last a vessel arrived at the Tail of the Bank at Greenock from a Spanish port, and the crew were reported well by the Master. The tide permitted the vessel to go on, and she was examined in passing, arriving in one of the harbours of the Port Local Authority of Glasgow about two hours afterwards. Same day two spots appeared on the face of one of the crew—a fireman—but without doing more than attracting attention, until two days afterwards, when he fell ill and consulted a Doctor, who told him they were the early indication of a Smallpox eruption. When the vessel passed the Boarding Station, therefore, although no eruption was present it is likely that a temperature observation would have disclosed a degree of fever, which would have been sure to have attracted attention. Two questions thus arise:—

(1) What power has a Boarding Officer in these circumstances to detain a ship for reasonably complete inspection?

(2) If in doing so he causes a vessel to lose the tide, and possibly adds to the working expenses of the voyage by the delay of a day, have the owners a case for damages?

To answer these questions a short statement of the legal power to board and inspect shipping for the discovery of disease and for public health purposes generally is necessary. The references are mainly to sections of the Acts applicable to Scotland, but corresponding sections exist in the English Public Health Act.

Such power as exists is contained primarily in the Public Health (Scotland) Act, 1897, supplemented in specified circumstances by Regulations which have been issued by the Local Government Board under the provisions of Part IV. thereof and of the Public Health Act, 1904.

## THE CHOLERA, &amp;C., REGULATIONS.

*Inspection for the Discovery of Nuisances.*—Section XVIII. of the Act confers power of entry on the Local Authority and its officers, if there is “reasonable ground for believing that nuisance exists,” and provides that, if admission be refused, a Sheriff, Magistrate, or Justice of the Peace, “having jurisdiction in the place,” may, on application, and other intimation to the owner or occupier or person in charge, issue an Order requiring them to admit the Local Authority and its officers. A reasonable interpretation of this

(1) Before Port Local Authorities' Association, London, January, 1913.

provision seems to me to require something more than a general suspicion that defects in structure or use, such as may be classified as nuisances exist, and that not only might a Captain refuse boarding for this purpose, but that, should detention occur, he or his owners would have reasonable ground for compensation should pecuniary loss result.

*For the Discovery of Infectious Disease.*—Section XLV. of the Act makes similar provision with regard to the detection of infectious disease, and again the Sheriff, &c., may, “on reasonable cause shown,” grant a warrant authorising entry, but as with regard to nuisances, so here it would be difficult to establish a presumption that infectious disease existed on board any ship solely because during the voyage she may have called at a port in which such was present.

*Exotic Disease.*—To meet the difficulty here emerging with regard to the old quarantine diseases, Regulations as to Cholera, Plague, and Yellow Fever have been issued by the Local Government Board under Part IV. of the Public Health Act. The latest Order, which superseded the original Order of 1898, is dated 13th September, 1907.

This confers the power of inspection and detention under three specified conditions, namely—where a ship is “infected” or “suspected” as defined in the Order itself, or where it has come from, or has during the voyage called at, a port infected with cholera, yellow fever, or plague. It places on the Customs Officer the responsibility of asking certain questions with regard to the occurrence during the voyage of any of these diseases, and apart from this, provided the ship has come from a port infected with any of them, he may detain the ship if he thinks fit pending an inspection by the Medical Officer (Article II. (1) and (2)).

A discretionary power is also conferred on the Medical Officer by Article VIII. of the Order, by which he may visit and examine any “infected” or “suspected” ship, or any ship if he has reason to suppose that it has come from or has during the voyage called at a port infected with “cholera, yellow fever, or plague,” and the “master shall permit the ship to be so visited and examined.”

Article VIII. further provides that the “master of any such ship shall, on being required so to do by the Medical Officer of Health, cause the ship to be brought to, and, if necessary, moored or anchored in some convenient place for the purpose of examination, due regard being paid to the safety of the ship and convenience of navigation.”

These are the only circumstances under which boarding and inspection may be carried out save by consent of the master, and the diseases to which they apply are limited to those dealt with in the Cholera and allied Regulations.

Within the limits of these Regulations, and provided the circumstances which they contemplate emerge, no difficulty regarding detention for the purposes of examination arises; but the case is different when effort is made to apply similar measures for the general purposes of the Public Health Act, and to raise the standard of inspection to something approaching that which is followed in foreign ports.

To meet these difficulties, and particularly to meet the risk of imported Smallpox at the present time, Dr. Chalmers suggested to the Association:—

(1) The desirability of having the present Cholera Regulations extended to Smallpox in shipping coming from foreign ports where the disease is known to exist, and

(2) That the Local Government Board be asked to issue periodically, from information obtained through H.M. Consuls in foreign capitals, a statement of the principal infectious diseases present in foreign ports similar indeed to what is contained in the weekly Reports of the U.S. Public Health Service.

January, 1913.

## APPENDIX VI.

## THE ADDED BURGHAL AREAS.

In former years the Medical Officers of the several Burghs which were included in the 1912 extension presented Annual Reports in which the vital statistics of the Burghs and their constituent Wards were dealt with in considerable detail. For the reasons stated on page 2, corresponding information is now submitted for the year 1912 for each of the included Burghs, the rearrangement of the Ward boundaries precluding, without an expenditure of time and labour out of proportion to its value, the allocation of details to each of the original Burgh Wards.

## POPULATIONS.

For the total added area the population at the Census, 1911, was 223,991, and, calculated on the number of inhabited houses, the estimated population at the middle of 1912 was 230,613, an increase of 6,622, or 2·956 per cent.

The portions of this population within the Burghs at the Census, and as estimated in the middle of 1912, are as follows:—

	Govan.	Partick.	Pollokshaws.	Total Burghs.
1911. Census,	89,605	66,849	12,932	169,386
1912. Estimated,	90,118	69,807	12,746	172,671
Difference,	+ 513	+ 2,958	- 186	+ 3,285
„ per cent.,	—	—	—	1·939

The increase within the Burghs was almost 2 per cent., as compared with over 6 in the landward areas. The largest Burghal increase occurred in Partick with almost 3,000, Govan increased by 513, while Pollokshaws showed a decrease of 186. Compared with these increases, the following statement of the excess of births over deaths shows that while Govan and Pollokshaws, whose areas are almost entirely built upon, lost most of their natural increase, Partick shows an increase of 1,972 in excess of the difference between births and deaths:—

	1912.	Govan.	Partick.	Pollokshaws.
Births, - - - - -		2,725	1,960	340
Deaths - - - - -		1,379	974	192
Excess of births over deaths, -		1,346	986	148
Estimated increase or decrease,		+ 513	+ 2,958	- 186

Table I. shows the number of inhabited houses and the population of each Ward of the added areas, together with the number of empty houses in 1911 and 1912.

In Table II. the changes in the population in the various Wards of the added areas, as compared with the Census, is shown. Plantation and Govan Central show decreases, excluding County areas.

The increase of population in the added areas as a whole is equal to nearly 3 per cent. on the Census population. As the increase within the old area of Glasgow during the same period was only 56, the total increase of the extended City is 0·7 per cent.

## UNOCCUPIED HOUSES.

The number of unoccupied houses at 30th June, 1912, in the added areas, shows a considerable decrease on that of the previous year, there being 3,750 as compared with 4,553.

The number of inhabited and unoccupied houses as at the Census, 1911, and the figures for 1912, are shown in Table I.



## ACREAGE.

The acreage of the Wards as presently constituted is shown in Table II. hereto. Govan, with the landward portion of Lanarkshire to the west, is divided into four Wards—Plantation, Ibrox, Govan Central, and Fairfield. Partick Burgh is divided into three Wards—Partick East, Central, and West; while the Burgh of Pollokshaws, with a portion of Renfrewshire to the east, forms Pollokshaws Ward. These Wards in relation to Wards in the Burghs as before annexation are described in Appendix VII.

The acreage of these areas amounts to 6,208, which brings up the total area of the extended City to 19,183 acres.

## BIRTHS.

The number of births in the Burghs during 1912 was as follows:—

1912.	Legitimate.	Illegitimate.	Total.	Rate per thousand of the population.	Percentage Illegitimate.
Govan, - -	2,606	119	2,725	30·238	4·4
Partick, - -	1,865	95	1,960	28·077	4·8
Pollokshaws, -	320	20	340	26·675	6·3

The highest birth-rate was registered in Govan, while Partick, with a rate of 28 per thousand, was slightly in excess of the rate for Glasgow.

Pollokshaws had the highest percentage of illegitimacy namely, 6·3; in Partick it was 4·8; and Govan, 4·4.

## DEATHS.

The deaths registered in Govan number 1,045, but when adjusted for transfers, mostly inward, from Merryflats and Shieldhall Hospitals, this number is increased to 1,379, which is equal to a rate of 15·302 per thousand of the population. The registered deaths in Partick numbered 774, the deaths as adjusted, 974, which is equal to a death-rate of 13·952, while the corresponding figures for Pollokshaws were 159, 202, and 15·848.

*Certification.*—The number of uncertified deaths is shown in Tables IV., VII., and X. In Govan there were 8 such deaths all under one year of age; Partick had 7, 4 of them being under 1 and 3 over 45 years of age; while no uncertified deaths occurred in Pollokshaws.

*Age Periods.*—The percentage of deaths occurring at various age periods is also shown in the Tables mentioned above, and may be collected in the following summary:—

Age in Years.	Govan.	Partick.	Pollokshaws.	Glasgow.
- 1 ...	22·5	21·4	16·8	20·9
- 2 ...	5·6	8·1	8·4	8·0
- 5 ...	4·5	7·2	7·8	6·0
- 15 ...	5·4	4·7	5·0	4·6
- 25 ...	4·9	4·0	5·0	4·5
- 45 ...	14·4	11·9	15·4	14·0
- 65 ...	24·9	20·5	15·4	22·9
65 + ...	17·8	22·2	27·2	19·1

## DEATHS OF NON-RESIDENTS.

During the year 10 deaths of persons whose usual place of residence was outside the Burgh of Govan were transferred outwards, while 344 deaths were transferred to the Burgh.

For Partick the outward transfer deaths number 19, and the inward transfer deaths 219.

There was no outward transfer deaths from Pollokshaws, but the inward transfers number 43.

A large number of the inward transfer deaths to Govan and Partick is accounted for by the fact that their Infectious Disease Hospitals and the Parish Hospital (Merryflats) are outwith their boundaries.

The following Table shows the transfer deaths of these Burghs in various groups:—

#### DEATHS TRANSFERRED OUTWARD.

			Govan.		Partick.		Pollokshaws.
Zymotic Diseases,	...	...	—	...	—	...	—
Septic Diseases,	...	...	—	...	—	...	—
Tuberculous Diseases,	...		1	...	1	...	—
Cancer, Malignant Diseases,	...		2	...	2	...	—
Nervous Diseases,	...	...	1	...	3	...	—
Diseases of Circulatory System,			—	...	5	...	—
Diseases of Respiratory System,			3	...	2	...	—
Others,	...	...	3	...	6	...	—
			<u>10</u>		<u>19</u>		<u>—</u>

#### DEATHS TRANSFERRED INWARDS.

			Govan.		Partick.		Pollokshaws.
Zymotic Diseases,	...	...	29	...	26	...	8
Septic Diseases,	...	...	19	...	7	...	2
Tuberculous Diseases,	...		63	...	36	...	4
Cancer, Malignant Diseases,	...		12	...	10	...	3
Nervous Diseases,	...	...	27	...	19	...	1
Diseases of Circulatory System,			41	...	28	...	3
Diseases of Respiratory System,			44	...	20	...	2
Digestive Diseases,	...	...	38	...	23	...	5
Others,	...	...	71	...	50	...	15
			<u>344</u>		<u>219</u>		<u>43</u>

#### DEATH-RATES.

The death-rates in the various Burghs during recent years may be compared in the following:—

Year.			Govan.		Partick.		Pollokshaws.
1906,	...	...	16·6	...	14·5	...	15·3
1907,	...	...	17·8	...	15·7	...	16·4
1908,	...	...	17·2	...	14·2	...	18·3
1909,	...	...	17·5	...	14·3	...	15·5
1910,	...	...	15·4	...	13·4	...	16·5
1911,	...	...	17·3	...	14·3	...	13·5
1912,	...	...	15·3	...	14·0	...	15·8

In Govan the death-rate is the lowest during the years quoted, while in Partick it was lower in 1910, and in Pollokshaws in 1906, 1909, and 1911.

## CAUSES OF DEATH.

The death-rates for several classes of disease may be stated in the following way:—

	Govan.	Partick.	Pollokshaws.
Zymotic Diseases, ... ..	·765	1·561	1·177
Septic Diseases, ... ..	·322	·200	·470
Tuberculous Diseases, ... ..	2·086	1·519	2·039
Cancer, Malignant Diseases, ... ..	·655	·774	·863
Nervous Diseases, ... ..	1·487	1·232	1·882
Diseases of Circulatory System, ... ..	1·842	1·590	1·649
Diseases of Respiratory System, ... ..	3·030	2·478	3·060
Digestive Diseases, ... ..	1·442	·988	1·334
Other Causes, ... ..	3·673	3·610	3·374
	<u>15·302</u>	<u>13·952</u>	<u>15·848</u>

The death-rate from zymotic diseases in Partick, 1·561, is double that of Govan, and exceeds that of Pollokshaws. This is mainly accounted for by the mortality from measles in Partick, which was 0·859 per 1,000 of the population, while in Govan the death-rate from this disease was only 0·189. No deaths from measles were recorded in Pollokshaws. Pollokshaws, however, had the highest death-rate from whooping-cough.

The death-rate from tuberculous diseases in both Govan and Pollokshaws exceeded 2 per 1,000, that for Partick being 1·519.

From respiratory diseases, the rate in Partick is again below that of Govan and Pollokshaws, whose rates exceeded 3 per 1,000.

The death-rates from nervous, circulatory, and diarrhœal diseases in Govan and Pollokshaws are very uniform, and in each case exceeded the rates for Partick.

## INFANT MORTALITY.

The deaths of children under one year of age are shown in Tables V., VIII., and XI. They are analysed to show the causes of deaths in the first four weeks, and at age periods—3, —6, —9, and —12 months.

In Govan there were 310 deaths of children under one year, representing a rate of 114 per 1,000 births; in Partick the deaths numbered 208, with a rate of 106; while in Pollokshaws 34 such deaths were registered, the rate being 100.

In both Govan and Partick the rates are considerably below those of last year, while that for Pollokshaws is the same:—

Year.	Govan.	Partick.	Pollokshaws.
1908, ... ..	137	111	114
1909, ... ..	133	113	106
1910, ... ..	100	122	111
1911, ... ..	137	122	100
1912, ... ..	114	106	100
Average of 5 years, 1908-12, ... ..	<u>124</u>	<u>115</u>	<u>106</u>

The Govan rate for 1910 is the only instance during the past five years which is lower than the present infant mortality rate. The average rate for the past 5 years in each of the Burghs is 10, 9, and 6 above the 1912 figures in Govan, Partick, and Pollokshaws respectively. In each case these rates are lower than the rate for Glasgow.



In Govan, the number of deaths under one year which were not certified was 8, or 2·6 per cent.; in Partick, 6, or 3·0 per cent; but in Pollokshaws there were no uncertified deaths of this age. Almost all the uncertified deaths occurred in the first week of life.

Of these deaths, in Govan 29 were of illegitimate children; in Partick 10.

The following shows the number of these deaths and the rates per thousand of each class calculated on the legitimate and illegitimate births:—

		Deaths.		Rate per 1,000 Births.	
		Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
Govan, ...	...	281	29	108	244
Partick, ...	...	198	10	106	105
Pollokshaws,	...	34	—	100	—

The proportion of total infant deaths occurring during the first month, and under 3, 6, 9, and 12 months, may be summarised as follows—

	Age in Months at Death.				
	- 1.	- 3.	- 6.	- 9.	- 12
Govan, ... ..	36	17	18	13	16
	53				
Partick, ... ..	37	17	16	12	18
	54				
Pollokshaws, ... ..	35	24	20	9	12
	59				

In each of the Burghs the deaths under the first *three* months exceeded 50 per cent. of the total under one year, no less than 36, 37, and 35 per cent. occurring in Govan, Partick, and Pollokshaws respectively in the first month. Most of these percentages are attributed to deaths from immaturity, which invariably form about one-third of the total.

The causes of death in the first year of life are collected together in the following statement:—

Cause of Death.	Rate per 1,000 Births.		
	Govan.	Partick.	Pollokshaws.
Infectious Diseases, ... ..	9·2	12·2	8·8
Tuberculous Diseases, ... ..	4·0	4·6	—
Nervous Diseases, ... ..	7·3	6·1	2·9
Respiratory Diseases, ... ..	18·7	19·9	29·4
Digestive Diseases, ... ..	14·3	8·7	8·8
Immaturity, ... ..	37·2	37·8	29·4
Others, ... ..	23·1	16·8	20·7
Total, ... ..	113·8	106·1	100·0

As already mentioned, the prevalence of measles in Partick accounts for the high death-rate from infectious diseases. Pollokshaws returns the highest death-rate from respiratory diseases, while Govan had the highest death-rate from digestive diseases.

These rates illustrate the isolated nature of infection in the three Burghs, which are parts of a large community, but disconnected to a certain extent in the case of Partick and Govan by the river, and the latter from Pollokshaws by a good residential district.

In Govan and Partick, previous to annexation, there was one Health Visitor in each, the latter working in association with the Partick Infant Health Visitors' Association. For administrative purposes and uniformity of work this body was merged in the Glasgow body, but retained as a district unit, while a District Branch has now been formed in Govan.

INFECTIOUS DISEASES.

The number of cases of infectious disease occurring during 1912 are shown in Tables III., VI., and IX. These Tables are divided into two parts, the first part of each including the diseases compulsorily notifiable under the Infectious Disease (Notification) Act, 1889, and for phthisis since 1st August, under the Pulmonary Tuberculosis Regulations, 1912, while the second part gives the figures for measles, whooping-cough, chickenpox, and mumps.

The diseases are shown in various age groups, and whether treated at home or in hospital.

The diseases contained in the first section of these Tables number in Govan 929, of which 623, or 67 per cent., were removed to hospital; in Partick there were 678 such cases, of which 444 or 65 per cent. were removed to hospital; and in Pollokshaws 216, with 186 removed to hospital, or 86 per cent.

ENTERIC FEVER.

14 cases of enteric fever occurred in Govan during the year, 9 cases in Partick, and 13 in Pollokshaws. Except one in Partick, all were removed to hospital. The case-rate was higher in Pollokshaws, and is considerably above the average of 391 for the past five years. Both Govan and Partick were below the five years' average, with case-rates of 155 and 129 per million of the population:—

Year.	Govan.		Partick.		Pollokshaws.	
	Rates per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death.
1908, ... ..	716	119	636	74	157	...
1909, ... ..	331	133	461	30	314	78
1910, ... ..	309	66	477	89	231	...
1911, ... ..	300	67	774	104	231	77
1912, ... ..	155	33	129	29	1,020	...
Average of 5 years, ...	302	83	495	65	391	31

TYPHUS FEVER.

In Govan 9 cases of typhus fever occurred in 1912, and 3 in Partick, all of them being removed to hospital. 3 of the Govan cases died, and 1 in Partick. The rates are summarised in the following Table, with the corres-

ponding rates for the past four years. No cases have occurred in Pollokshaws during this period :—

Year.	Govan.		Partick.		Pollokshaws.	
	Rates per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death.
1908, ... ..	11	11	...	...	...	...
1909, ... ..	...	...	...	...	...	...
1910, ... ..	66	22	15	...	...	...
1911, ... ..	33	...	...	...	...	...
1912, ... ..	100	33	43	14	...	...
Average of 5 years, ...	42	13	11	3	...	...

SCARLET FEVER.

In Govan there were 314 cases of scarlet fever during the year, of which 296 were treated in hospital; in Partick, 220 cases, and 198 treated in hospital; and in Pollokshaws 92, with 87 receiving hospital treatment. The percentages receiving hospital treatment were thus 94, 90, and 95 respectively.

4 deaths occurred in Govan, 7 in Partick, and 2 in Pollokshaws. The case-rate in Pollokshaws was relatively high, showing an increase on the previous year, which is also in excess of the five yearly average. Partick case- and death-rates for the year are below the average, as is also the Govan death-rate :—

Year.	Govan.		Partick.		Pollokshaws.	
	Rates per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death
1908, ... ..	2,374	119	2,128	74	5,647	157
1909, ... ..	3,314	133	3,617	104	3,529	78
1910, ... ..	4,405	77	7,151	194	3,154	231
1911, ... ..	3,441	178	5,506	208	6,769	77
1912, ... ..	3,484	44	3,152	100	7,218	157
Average of 5 years, ...	3,476	108	4,311	136	5,143	140

DIPHThERIA AND MEMBRANOUS CROUP.

The cases of diphtheria and membranous croup numbered 171 in Govan, 223 in Partick, and 70 in Pollokshaws, the respective case-rates being 1,898, 3,194, and 5,492 per million of the population. Only 9 cases in Govan and 5 in Partick were not removed to hospital.



16 deaths occurred in Govan, while a similar number occurred in Partick, and 6 in Pollokshaws.

The case-rate was highest in Pollokshaws and lowest in Govan, but in each case it was higher than the average of the five years shown. The lowest death-rate is recorded in Govan, and the highest in Pollokshaws:—

Year.	Govan.		Partick.		Pollokshaws.	
	Rate per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death.
1908, ... ..	2,007	282	976	103	1,255	157
1909, ... ..	1,226	155	1,637	238	471	157
1910, ... ..	1,689	243	2,756	209	1,000	77
1911, ... ..	1,621	200	2,336	253	2,538	231
1912, ... ..	1,898	177	3,194	229	5,492	471
Average of 5 years, ...	1,688	211	2,180	206	2,151	219

#### ERYSIPELAS.

The cases of erysipelas occurring during the year were 150, 77, and 18 in Govan, Partick, and Pollokshaws respectively, these representing rates of 1,664, 1,103, and 1,412 per million. There were 6 in Govan, and 2 deaths each in Partick and Pollokshaws respectively. The rates are shown in the following Table, with those for the four preceding years for comparison:—

Year.	Govan.		Partick.		Pollokshaws.	
	Rate per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death.
1908, ... ..	1,085	76	872	...	784	...
1909, ... ..	1,458	44	893	...	314	...
1910, ... ..	1,038	33	775	...	462	...
1911, ... ..	1,487	67	893	30	1,077	...
1912, ... ..	1,664	67	1,103	29	1,412	157
Average of 5 years, ...	1,346	57	907	12	810	31

#### PUERPERAL FEVER.

25 cases of puerperal fever occurred in Govan, 5 in Partick, and 1 in Pollokshaws; and the deaths occurring were 10 in Govan, and 1 each in Partick and Pollokshaws. The following Table shows the rates for these and similar figures for the previous years:—

Year.	Govan.		Partick.		Pollokshaws.	
	Rate per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death.
1908, ... ..	65	22	74	...	157	...
1909, ... ..	99	44	164	...	78	...
1910, ... ..	144	77	104	30	...	...
1911, ... ..	155	78	74	59	231	77
1912, ... ..	277	111	72	14	78	78
Average of 5 years, ...	148	66	98	23	109	31

## CEREBRO-SPINAL FEVER.

7 cases of cerebro-spinal fever were registered in Govan, 5 in Partick, and 1 in Pollokshaws, while 7, 3, and 1 deaths were registered therein. The case- and death-rates are given in the following Table:—

Year.	Govan.		Partick.		Pollokshaws.	
	Rate per Million of the Population.					
	Case.	Death.	Case.	Death.	Case.	Death
1908, ... ..	174	141	192	133	78	78
1909, ... ..	88	55	104	60	...	...
1910, ... ..	22	11	45	15	...	...
1911, ... ..	22	22	60	45	...	...
1912, ... ..	78	78	72	43	78	78
Average of 5 years, ...	97	61	95	59	31	31

## MEASLES.

17 deaths from measles occurred in Govan, 60 in Partick, and none in Pollokshaws. These represent for Govan and Partick rates of 189 and 859 per million respectively.

As no effort was made in these Burghs to register all the cases of measles, the case-rates are of no value:—

Year.	Govan.	Partick.	Pollokshaws.
	Death-rate per Million of the Population.		
1908, ... ..	727	547	1,412
1909, ... ..	1,337	253	78
1910, ... ..	618	656	923
1911, ... ..	610	45	...
1912, ... ..	189	859	...
Average of 5 years, ...	696	472	483

### WHOOPIING-COUGH.

19 deaths in Govan, 20 in Partick, 6 in Pollokshaws, were attributed to whooping-cough, representing rates of 211, 287, and 471 respectively.

In all cases these rates are below the average of the five years shown in the following Table.

The same remark as to case-rates for measles applies to whooping-cough:—

Year.	Govan.	Partick.	Pollokshaws.
	Death-rate per Million of the Population.		
1908, ... ..	640	370	941
1909, ... ..	762	491	1,098
1910, ... ..	232	328	...
1911, ... ..	1,132	819	538
1912, ... ..	211	287	471
Average of 5 years, ...	595	473	610

### TUBERCULOUS DISEASES.

#### PULMONARY TUBERCULOSIS.

The following Table gives the cases and deaths, with the rates per million, for pulmonary tuberculosis:—

	Case.	Death.	Rate per Million of the Population.	
			Case.	Death.
Govan, ... ..	235	124	2,608	1,376
Partick, ... ..	135	67	1,934	960
Pollokshaws, ...	21	16	1,648	1,255

In Partick, phthisis was compulsorily notifiable prior to the coming into operation in August of the Pulmonary Tuberculosis (Scotland) Regulations, 1912, so that the case-rate does not afford a strict comparison with the other Burghs. The death-rate in Govan was 1,376 per thousand of the population, in Pollokshaws 1,255, and in Partick 960.

The percentage of deaths from phthisis occurring at various age periods is shown in the following statement:—

Age.	Govan.	Partick.	Pollokshaws.
— 1	1·6	3·0	—
— 2	3·2	—	—
— 5	0·8	1·5	—
— 15	9·7	7·4	6·2
— 25	16·9	20·9	37·5
— 45	46·0	44·8	43·8
— 65	19·4	20·9	12·5
65 +	2·4	1·5	—



The proportion occurring in each of the Burghs in the various age periods is approximately uniform, the deaths at ages 25-45 in each case forming practically one-half of the total from this cause, while all deaths over 25 form between 60 and 70 per cent. of the total.

OTHER TUBERCULOUS DISEASES.

In Govan, the number of deaths from other forms of tuberculosis numbered 64, in Partick 39, and in Pollokshaws 10. The rates represented by these figures and for phthisis are shown in the following summary:—

	Govan.	Partick.	Pollokshaws.
	Death-rate per Million of the Population.		
Phthisis, ... ..	1,376	960	1,255
Tuberculous Meningitis, ...	311	201	235
Abdominal Tuberculosis, ...	166	229	235
Other Tuberculous Diseases. ...	233	129	314
	710	559	784
Total, ... ..	2,086	1,519	2,039
Death-rate, "All Causes," ...	15,302	13,952	15,848

The death-rate from "other forms of tuberculosis" was highest in Pollokshaws, with 784 per million, followed by Govan with 710, and Partick with 559.

Tuberculous meningitis had the highest rate in Govan, while Pollokshaws has the highest rates from abdominal tuberculosis and other tuberculous diseases.

The total rates from all tuberculous diseases is greatest in Govan, which with Pollokshaws have rates over 2,000; while in Partick it was 1,519.

Stated as percentages of the total death-rate, the above rates represent in Govan, Partick, and Pollokshaws, respectively, 14, 13, and 11.

A. K. CHALMERS.

Sanitary Chambers,  
Glasgow, 31st July, 1913.

## BURGHES—GOVAN, PARTICK, AND POLLOKSHAWS.

TABLE I.

GLASGOW, 1912.—ADDED AREAS SHOWN IN WARDS.—INHABITED HOUSES (AS SHOWN ON VALUATION ROLLS), AND ESTIMATED POPULATIONS AT 30TH JUNE, 1911 AND 1912.

MUNICIPAL WARDS.	INHABITED HOUSES.			POPULATION.			EMPTY HOUSES.	
	1911.	1912.	Increase.	1911 Census.	1912.	Increase.	1911.	1912.
27. Plantation, -	5,960	6,049	...	27,708	27,593	...	696	632
28. Ibrox, -	3,980	4,074	...	19,321	19,340	...	632	558
29. Govan (Central), -	4,360	4,411	...	21,774	21,768	...	481	432
30. Fairfield, -	4,186	4,358	...	19,388	20,216	...	504	344
31. Partick (East), -	4,721	4,810	...	21,510	22,171	...	404	326
32. „ (Central),	5,863	5,988	...	25,948	26,653	...	622	498
33. „ (West), -	4,110	4,337	...	18,810	20,386	...	304	197
34. Jordanhill, -	2,839	2,976	...	13,211	14,190	...	169	89
35. Pollokshaws, -	3,004	3,015	...	12,967	13,406	...	169	167
36. Cathcart, -	3,056	3,179	...	12,766	13,957	...	164	130
37. Shettleston and Tollcross, -	5,451	5,518	...	25,490	26,102	...	408	377
Institutions, -	...	...	...	4,455	4,188	...	...	...
Shipping, -	...	...	...	643	643	...	...	...
Total, Annexed Areas,	47,530	48,715	1,616	223,991	230,613	6,622	4,553	3,750
„ Old Glasgow, -	164,528	164,541	13	784,496	784,552	56	19,653	18,887
„ Greater Glasgow,	212,058	213,256	1,629	1,008,487	1,015,165	6,678	24,206	22,637

TABLE II.—AREAS ADDED TO THE CITY.—ACREAGE, INHABITED HOUSES, and PERSONS per ACRE in each MUNICIPAL WARD in 1912; also the POPULATION and PERSONS per ACRE at the CENSUS of 1911, and the PERCENTAGE INCREASE or DECREASE in the POPULATION during the Intervening Period.

MUNICIPAL WARDS.	Acreage, 1911.	Inhabited Houses, 1912.	POPULATION.						Persons per Acre (including Institutions and Shipping).	
			Census, 1911.	Estimated, Middle of 1912.	Increase.	Decrease.	Per Cent. Increase.	Per Cent. Decrease.	Census, 1911.	1912.
27. Plantation, - - -	335	6,049	27,708	27,593	...	115	...	0.4	86	86
28. Ibrox, - - -	328	4,074	19,321	19,340	19	...	0.1	...	60	60
29. Govan (Central), - - -	289	4,411	21,774	21,768	...	6	...	...	75	75
30. Fairfield, - - -	1,090	4,358	19,388	20,216	828	...	4.3	...	20	20
31. Partick (East), - - -	153	4,810	21,510	22,171	661	...	3.1	...	142	146
32. " (Central), - - -	282	5,988	25,948	26,653	705	...	1.2	...	92	95
33. " (West), - - -	571	4,337	18,810	20,386	1,576	...	8.3	...	34	36
34. Jordanhill, - - -	1,087	2,976	13,211	14,190	979	...	7.4	...	12	13
35. Pollokshaws, - - -	239	3,015	12,967	13,406	439	...	3.4	...	54	56
36. Cathcart, - - -	753	3,179	12,766	13,957	1,191	...	9.3	...	17	19
37. Shettleston and Tollcross, - - -	1,081	5,518	25,490	26,102	612	...	2.4	...	24	25
Institutions and Shipping, - - -	...	...	5,098	4,831	...	267	...	...	...	...
Total, Annexed Areas, - - -	6,208	48,715	223,991	230,613	6,622	...	3.0	...	36	37
" Old Glasgow, - - -	12,975	164,541	784,496	784,552	56	...	...	...	60	60
" Greater Glasgow, - - -	19,183	213,256	1,008,487	1,015,165	6,678	...	0.7	...	53	53



TABLE III.

GOVAN, 1912.—CASES OF INFECTIOUS DISEASE REGISTERED AT SEVERAL AGE PERIODS AND  
NUMBER TREATED IN HOSPITAL.

*Population—Census, 1911—89,605.* *Population estimated to middle of 1912—90,118.*

DISEASE.	At all Ages.	AT AGE.—YEARS.							Cases Removed to Hospital.	Cases not Removed to Hospital.	Case- Rate per Million.
		Under 1.	1-5.	5-15.	15-25.	25-45.	45-65.	65 and Upwards.			
A.—NOTIFIED UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.											
Typhoid or Enteric Fever, ...	14	...	...	3	5	5	1	...	14	...	155
Typhus Fever, ...	9	...	1	1	1	6	...	...	9	...	100
Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina,	314	3	93	165	45	7	1	...	296	18	3,484
Diphtheria or Membranous Croup, ...	171	9	80	66	8	4	3	1	152	19	1,898
Erysipelas, ...	150	7	6	14	20	54	35	14	58	92	1,664
Puerperal Fever, ...	25	...	...	...	7	18	...	...	23	2	277
Cholera, ...	...	...	...	...	...	...	...	...	...	...	...
Relapsing Fever, ...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever, ...	3	...	...	...	...	2	1	...	3	...	33
Cerebro-Spinal Fever, ...	7	3	3	1	...	...	...	...	...	7	78
Phthisis, ...	235	2	8	30	59	99	34	3	68	167	2,608
Ophthalmia Neonatorum, ...	4	4	...	...	...	...	...	...	...	4	45
Total, ...	932	28	191	280	145	195	75	18	623	309	10,342
B.—NOT NOTIFIED UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.											
Measles, ...	76	7	27	36	6	...	...	...	25	51	843
Whooping-cough, ..	71	12	19	40	...	...	...	...	4	67	788
Chickenpox, ...	14	1	3	10	...	...	...	...	1	13	155
Mumps, ...	1	...	...	...	1	...	...	...	1	...	11

CAUSE OF DEATH.	Deaths Registered in Burgh.	TRANSFERRED.		NET OR ADJUSTED DEATHS AT THE SUBJOINED AGES.								Death-rates per 1,000 of Estimated Population.	Group Death-rates.
		to Away.	To.	All Ages.	Under 1 Year.	1-2.	2-5.	5-15.	15-25.	25-45.	45-65.	65 and upwards.	
All Causes, { Certified, ... { Uncertified, ...	... ...	...	...	1,371 8	304 8	77	62	74	67	199	344	244	... ...
Enteric Fever, ...	...	...	3	3	...	...	...	...	1	1	1	...	0.687
Typhus Fever, ...	...	...	3	3	...	...	...	...	...	3	...	...	
Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles, ...	13	...	4	17	4	2	10	1	...	...	...	...	
Scarlet Fever, ...	...	...	4	4	...	...	1	2	1	...	...	...	0.067
Whooping-cough, ...	18	...	1	19	11	4	4	...	...	...	...	...	
Diphtheria and Croup, ...	2	...	14	16	5	4	5	2	...	...	...	...	
Influenza, ...	6	...	...	6	1	...	...	...	...	...	...	1	
{ Erysipelas, ... { Other Septic Diseases (not Puerperal),	5 4	...	1 9	6 13	3 1	...	...	...	...	1 2	1 3	1	0.322
Puerperal Fever, ...	1	...	9	10	...	...	...	...	1	8	1	...	
Cerebro-Spinal Meningitis, ...	6	...	1	7	3	3	1	...	...	...	...	...	
{ Phthisis (Pulmonary Tuberculosis); { Tuberculous Meningitis, ...	76 22	1	49	124	2	4	1	12	21	57	24	3	
{ Abdominal Tuberculosis, ...	13	...	6	28	4	5	7	9	2	1	...	...	2.086
{ Other Tuberculous Diseases.	15	...	2	15	2	2	3	3	1	2	...	...	
Cancer, Malignant Diseases, ...	49	...	6	21	3	2	1	3	4	4	3	1	
Acute Articular Rheumatism (Rheumatic Fever),	...	2	12	59	1	...	...	...	...	7	39	12	
{ Meningitis (not Tuberculous), ...	13	...	...	13	...	2	4	...	...	...	...	...	1.487
{ Cerebral Haemorrhage, ...	51	...	13	63	6	...	...	3	...	2	35	23	
{ Other Nervous Diseases, ...	44	...	14	58	19	4	1	3	3	5	18	5	
Diseases of Circulatory System, { Pneumonia (all forms, including Broncho- Pneumonia). ...	127 114	2	41	166	4	1	...	3	10	24	66	58	
{ Bronchitis, ...	82	1	32	145	37	17	8	8	4	20	33	18	3.030
{ Other Respiratory Diseases, ...	34	...	9	91	14	3	2	1	1	7	32	31	
{ Diarrhoea and Enteritis, ...	43	...	3	37	15	4	4	1	...	4	4	5	
{ Other Digestive Diseases, ...	49	...	1	44	30	4	1	4	1	...	2	2	
Violence, ...	28	...	37	86	15	2	...	7	3	17	28	14	1.442
Other Defined Diseases, ...	54	2	37	63	8	2	4	7	1	19	18	4	
Diseases—Ill-defined or Unknown, ...	176	...	...	54	53	1	...	...	...	...	...	...	
		1	33	208	69	8	5	3	11	15	30	67	
	1,045	10	344	1,379	310	77	62	74	67	199	344	246	15.302
Percentage deaths in age periods, ...	...	...	...	...	22.5	5.6	4.5	5.4	4.9	14.4	24.9	17.8	...





TABLE VI.

PARTICK, 1912.—CASES OF INFECTIOUS DISEASES REGISTERED AT SEVERAL AGE PERIODS AND  
NUMBER TREATED IN HOSPITAL.

Population—Census, 1911—66,849.

Population estimated to middle of 1912—69,807.

DISEASE.	At all Ages.	AT AGE.—YEARS.							Cases Removed to Hospital.	Cases not Removed to Hospital.	Case- Rate per Million.
		Under 1.	1-5.	5-15.	15-25.	25-45.	45-65.	65 and Upwards.			
A.—NOTIFIED UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.											
typhoid or Enteric Fever, ...	9	...	...	4	1	4	...	...	8	1	129
typhus Fever, ...	3	...	...	...	2	...	1	...	3	...	43
smallpox, ...	...	...	...	...	...	...	...	...	...	...	...
scarlet Fever or Scarlatina,	220	...	60	123	28	8	1	...	198	22	3,152
diphtheria or Membranous											
Croup, ...	223	5	80	99	28	9	1	1	174	49	3,194
erysipelas, ...	77	1	1	3	10	33	24	5	29	48	1,103
interperal Fever, ...	5	...	...	...	2	3	...	...	4	1	72
cholera, ...	...	...	...	...	...	...	...	...	...	...	...
relapsing Fever, ...	...	...	...	...	...	...	...	...	...	...	...
continued Fever, ...	...	...	...	...	...	...	...	...	...	...	...
cerebro-Spinal Fever, ...	5	1	2	1	1	...	...	...	4	1	72
phthisis, ...	135	1	3	14	46	45	25	1	24	111	1,934
ophthalmia Neonatorum, ...	1	1	...	...	...	...	...	...	...	1	14
Total, ...	678	9	146	244	118	102	52	7	444	234	9,713
B.—NOT NOTIFIED UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.											
measles, ...	86	3	29	34	14	6	...	...	47	39	1,232
whooping-cough, ...	83	6	41	36	...	...	...	...	3	80	1,189
chickenpox, ...	42	...	15	26	1	...	...	...	...	42	602

TABLE VII.—PARTICK, 1912.—DEATHS REGISTERED, TRANSFERRED AWAY AND TO THE BURGH, AND NET DEATHS AT VARIOUS AGE PERIODS  
FROM CERTAIN CAUSES, ALSO DEATH-RATE PER 1,000 OF THE POPULATION.

CAUSE OF DEATH.	Deaths Registered in Burgh.	TRANSFERRED.		NET OR ADJUSTED DEATHS AT THE SUBJUNED AGES.								Death-rates per 1,000 of Estimated Population.	Group Death-rates.
		Away	To.	All Ages.	Under 1 Year.	1-2.	2-5.	5-15.	15-25.	25-45.	45-65.	65 and Upwards.	
All Causes, { Certified, { Uncertified,	...	...	...	967 7	206 4	79	70	46	39	116	199	212 2	...
Enteric Fever, ...	2	...	...	2	...	...	1	...	...	1	...	...	1·518
Typhus Fever, ...	...	...	1	1	...	...	...	...	1	...	...	...	
Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles, ...	54	...	6	60	16	24	14	6	...	...	...	...	
Scarlet Fever, ...	4	...	3	7	...	1	6	...	...	...	...	...	0·029
Whooping-cough, ...	18	...	2	20	6	11	3	...	...	...	...	...	
Diphtheria and Croup, ...	2	...	14	16	4	2	4	4	...	1	1	...	
Influenza, ...	2	...	...	2	1	...	...	...	...	...	...	...	
{ Erysipelas, ...	1	...	1	2	...	...	...	...	...	1	...	1	0·200
{ Other Septic Diseases (not Puerperal),	6	...	5	11	2	...	1	2	2	1	2	1	
Puerperal Fever, ...	...	...	1	1	...	...	...	...	1	...	...	...	
Cerebro-Spinal Meningitis, ...	2	...	1	3	1	...	...	1	1	...	...	...	
{ Phthisis (Pulmonary Tuberculosis),	36	1	32	67	2	...	1	5	14	30	14	1	0·043
{ Tuberculous Meningitis, ...	13	...	1	14	4	4	4	2	...	...	...	...	
{ Abdominal Tuberculosis, ...	16	...	...	16	3	4	4	2	1	2	...	...	
{ Other Tuberculous Diseases, ...	6	...	3	9	...	...	1	2	...	4	2	...	
Cancer, Malignant Diseases, ...	46	2	10	54	...	...	...	...	2	6	21	25	0·774
Acute Articular Rheumatism (Rheumatic Fever),	...	...	...	...	...	...	...	...	...	...	...	...	
{ Meningitis (not Tuberculous), ...	6	...	3	9	3	3	2	...	1	...	...	...	
{ Cerebral Haemorrhage, ...	31	2	2	31	...	...	...	1	...	1	10	19	
{ Other Nervous Diseases, ...	33	1	14	46	9	5	3	...	...	7	15	7	1·232
Diseases of Circulatory System, ...	88	5	28	111	1	1	1	2	4	15	46	41	
{ Pneumonia (all forms, including Broncho-	73	1	17	89	21	11	8	5	2	14	15	13	
{ Pneumonia), ...	66	...	2	68	16	4	...	1	1	3	13	30	
{ Bronchitis, ...	16	1	1	16	5	...	2	...	...	1	3	5	2·478
{ Other Respiratory Diseases, ...	20	...	2	22	14	2	3	3	...	...	...	...	
{ Diarrhoea and Enteritis, ...	26	...	21	47	5	1	3	2	2	9	17	8	
{ Other Digestive Diseases, ...	19	3	18	34	3	1	2	2	4	8	10	4	
Violence, ...	47	...	3	50	47	...	...	1	...	2	...	...	0·487
Other Defined Diseases, ...	141	3	28	166	45	5	7	5	3	10	30	61	
All other Causes, ...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	13·952
...	774	19	219	974	208	79	70	46	39	116	200	216	
...	...	...	...	...	...	...	...	...	...	...	...	...	
Percentage deaths in age periods, ...	...	...	...	...	21·4	8·1	7·2	4·7	4·0	11·9	20·5	22·2	





TABLE IX.

POLLOKSHAWS, 1912.—CASES OF INFECTIOUS DISEASES REGISTERED AT SEVERAL AGE PERIODS AND  
NUMBER TREATED IN HOSPITAL.

*Population—Census, 1911—12,932.*

*Population estimated to middle of 1912—12,746.*

DISEASE.	At all Ages.	AT AGE—YEARS.							Cases Removed to Hospital.	Cases not Removed to Hospital.	Case Rat. per Milli.
		Under 1.	1-5.	5-15.	15-25.	25-45.	45-65.	65 and Upwards.			
A.—NOTIFIED UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.											
Typhoid or Enteric Fever, ...	13	...	2	6	3	2	...	...	13	...	1,02
Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...
Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina,	92	...	28	48	9	6	1	...	87	5	7,21
Diphtheria or Membranous											
Croup, ...	70	...	23	36	8	1	2	...	69	1	5,49
Erysipelas, ...	18	...	...	...	3	7	5	3	8	10	1,41
Puerperal Fever, ...	1	...	...	...	...	...	1	...	...	1	7
Cholera, ...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever, ...	1	...	...	...	...	1	...	...	...	1	7
Cerebro-Spinal Fever, ...	1	...	...	...	1	...	...	...	1	...	7
Phthisis, ...	21	...	...	...	8	10	3	...	8	13	1,64
Total, ...	217	...	53	90	32	27	12	3	186	31	17,02
B.—NOT NOTIFIED UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.											
Chickenpox, ...	2	...	...	2	...	...	...	...	...	2	15

CAUSE OF DEATH.	Deaths Registered in Burgh.	TRANSFERRED.		NET OR ADJUSTED DEATHS AT THE SUBJOINED AGES.								Death-rates per 1,000 of Estimated Population.	Group Death-rates.	
		Away.	To.	All Ages.	Under 1 Year.	1-2.	2-5.	5-15.	15-25.	25-45.	45-65.			65 and Upwards.
All Causes, { Certified, ... { Uncertified, ...	... ...	...	...	192	31	15	13	8	9	30	29	57	... ...	... ...
Enteric Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.099
Typhus Fever, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Smallpox, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles, ...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlet Fever, ...	...	2	...	2	...	1	1	...	...	...	...	...	...	0.157
Whooping-cough, ...	6	...	5	6	3	2	1	...	...	...	...	...	...	
Diphtheria and Croup, ...	1	...	...	6	...	1	3	2	...	...	2	...	...	
Influenza, ...	2	...	...	2	...	...	...	...	...	1	...	...	...	
Erysipelas, ...	...	2	...	2	...	...	...	...	...	...	...	1	...	0.470
Other Septic Diseases (not Puerperal),	3	...	...	3	1	1	...	...	...	...	...	...	...	
Puerperal Fever, ...	1	...	...	1	...	...	...	...	1	...	...	...	...	
Cerebro-Spinal Meningitis, ...	...	1	...	1	...	...	...	...	...	...	...	...	...	
Phthisis (Pulmonary Tuberculosis),	13	3	...	16	...	...	...	1	6	7	2	...	...	0.078
Tubercular Meningitis, ...	2	1	...	3	...	2	1	...	...	...	...	...	...	
Abdominal Tuberculosis, ...	3	...	...	3	...	...	2	1	...	...	...	...	...	
Other Tuberculous Diseases, ...	4	...	...	4	...	1	...	1	1	1	...	...	...	
Cancer, Malignant Diseases, ...	8	3	...	11	...	...	...	...	...	3	5	3	...	2.039
Acute Articular Rheumatism (Rheumatic Fever),	...	...	...	...	...	...	...	...	...	...	...	...	...	
Meningitis (not Tuberculous), ...	5	...	...	5	1	...	3	1	...	...	...	...	...	
Cerebral Hæmorrhage, ...	11	1	...	12	...	...	...	...	...	...	5	7	...	
Other Nervous Diseases, ...	7	...	...	7	1	2	...	...	...	...	1	3	...	1.882
Diseases of Circulatory System, ...	18	3	...	21	1	...	2	2	1	4	1	10	...	
Pneumonia (all forms, including Broncho-Pneumonia), ...	13	...	...	13	4	4	2	...	...	1	...	2	...	
Bronchitis, ...	23	2	...	25	6	1	...	...	...	1	4	13	...	
Other Respiratory Diseases, ...	1	...	...	1	...	...	...	...	...	1	...	...	...	3.060
Diarrhœa and Enteritis, ...	4	...	...	4	3	1	...	...	...	...	...	...	...	
Other Digestive Diseases, ...	8	5	...	13	...	...	...	1	...	4	5	3	...	
Violence, ...	...	5	...	5	...	...	1	...	1	2	1	...	...	
Other Defined Diseases, ...	5	...	...	5	4	...	...	...	...	...	1	...	...	1.334
All other Causes, ...	21	10	...	31	10	1	...	1	...	5	2	12	...	
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TABLE XII.—AREAS ADDED TO CITY :—NUMBER OF HOUSES LET IN LODGINGS AND FARMED-OUT HOUSES, SIZES OF HOUSES AND NUMBER OF INMATES.

FARMED-OUT HOUSES.													
WARDS.	HOUSES LET IN LODGINGS.							Inmates in Houses of each Size.					
	No. of Houses on Register.	No. of Houses Empty or in which no Lodgers kept.	No. of Houses Actually Let in Lodgings.	No. of Apartments.	No. to Accommodate (Adults).	Inmates found.		Number of Houses Farmed-out.		1 Apartment.			
						No. of Families.	Total No. of Persons (All Ages).	1 Apt.	2 Apts.	Adults.		Children.	
										Adults.	Children.		
27. Plantation, ...	4	...	4	12	49	9	21	144	10	230	127	19	11
28. Ibrox, ...	24	...	24	51	159½	65	139	...	...	...	...	...	...
29. Govan (Central), ...	21	...	21	43	145	51	107	...	...	...	...	...	...
30. Fairfield, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
31. Partick (East), ...	9	...	9	18	57½	19	51	...	...	...	...	...	...
32. " (Central), ...	15	...	15	30	91	34	77	61	3	139	43	12	5
33. " (West), ...	7	...	7	14	48	18	37	...	...	...	...	...	...
34. Jordanhill, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
35. Pollokshaws, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
36. Cathcart, ...	...	...	...	...	...	...	...	...	...	...	...	...	...
37. Shettleston and Tolleross, ...	2	...	2	4	15	4	14	...	...	...	...	...	...
Total Annexed Areas,	82	...	82	172	565	200	446	205	13	369	170	31	16

